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LUCIA P. FULTON

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THE GIFT OF
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A THEORETICAL AND Chiefly Practical TREATISE OF FEVORS,

Wherein it's made Evident, that the Modern Practice of curing continual Fevors is dangerous and very unsuccessful.

Hereunto are added several Important Observations and Cures of Malignant Fevors, not inserted in the former Impression.

Written in Latin by *Gideon Harvey*, M. D. Physician in Ordinary to his Majesty.

Now rendered into English by *J. T.* and Surveyed by the Author.

LONDON, Printed for *William Thackeray* at the Angel in *Duck-Lane*. 1674.

TO THE
Phyſical Reader.

I Have long ſince obſerved, that Phyſicians did not cure continual Fevors, but rather did render them mortal: Though, if by good fortune any one hath been delivered of a Fevor, it is only to be imputed to the ſtrength of nature, which if ſhe had not been diſturbed by improper means, would have diſintangled her ſelf from the diſeaſe much ſooner, and with leſs danger.

The cauſe of this ſo unfortunate practice depends on a falſe ſuppoſi-

tion of fermentation, whence ſince they deſume erroneous indications, the ſucceſs muſt neceſſarily fruſtrate their expectation. I confeſs I have made uſe of the term of *fermentation* in ſeveral Treatiſes, and poſſibly in the illuſtration of Fevors, but to this intent only, that I might in ſome manner be complaiſant to the received opinion of the times, not in the leaſt imagining the notion thereof neceſſary, or contributing any whit to the knowledge or cure of Fevors. Moreover the Reader is to take notice, that at preſent I have not written or acted the part of a *Profeſſor* in the Chair, making a Methodical and Pedantick Lecture on the definition, diviſion, next the cauſes, then the Diagnoſtick, and afterward the Prognoſtick ſigns of Fevors, *&c.* But it is my purpoſe, to diſcourſe

ſuc-

ſuccinctly of ſuch things, as are moſt neceſſary for a Practical Phyſician, and of ſuch other caſes, as I could call to mind, ſince the time, when I had ſeldom leſs in cure than two hundred Patients that lay ſick of Fevors.

What concerns other theoretical notions, and farther obſervations touching the ſeveral kinds of Fevors, I ſhall hereafter propoſe them in diſtinct Sections; in the mean time, farewell.

Hatton Street near *Holborn.*

THE BOOKSELLER TO THE READER.

TAking my meaſures from the reception of the Latin Copies, I judged I ſhould do the publick ſervice in cauſing this Treatiſe to be faithfully tranſlated; and that it might be attended with a greater welcom, *I have obtained the favor from the Author to make a ſuperficial ſurvey of the Tranſlation, and to inſert the addition of very remarkable and important obſervations and cures, which have rendred the Treatiſe at leaſt a fourth part bigger than it was before; in having procured this, I doubt not but that you will eaſily believe I am,*

your Friend and Servant,

W. T.

A Theoretical and Practical TREATISE OF FEVORS.

CHAP. I.

Of the Nature of Innate Heat.

IT is uſual among Authors, to derive the name, they intend to impoſe upon the diſtempers of parts, from the chiefeſt ſymptom; whence the word *Febris*, (or Fevor) being taken from *fervor*, *i. e.* heat, or from *februa*, a ſort of fiery ſacrifices of the Antients, or from the verb

februo, i, e. I cleanſe, likewiſe πυρετὸς in Greek a Fevor, from τὸ πῦρ a fire, ſeem to be applied to this diſtemper. The word Fevor in Engliſh is certainly derived from *fervor*, heat, only leaving out the *r*, and therefore ought to be written Fevor, and not Fever, unleſs you derive it from the French word, *fievre*, by omitting the *i*.

Wherefore what this *fervor* or heat, or πῦρ fire ſignifie, will beſt appear by conferring with them the words *Calor* warmth, and *Calidum* heat, being their oppoſits: from warmth *Calor*, and heat *Calidum* we have our ſtrength and live, but through *Fervor* a deſtructive heat and fire, we loſe our ſtrength and end our days.

It will much conduce to our purpoſe I judge, to premiſe the difference of theſe words. *Calidum* heat denotes a hot eſſence or ſubſtance, but *Calor* warmth ſignifieth only a quality ſeparable from its ſubject or hot nature by our thoughts or concept, and not really, though θερμὸν *calidum* or heat, and θερμασίη *Calor* warmth, are by *Hippocrates* uſed in the ſame ſenſe. Neither are you to imagine, that in feeling of Pulſes of ſuch as are ill of a Fevor, it is not the quality of heat, but fiery ſteems, bodies really phyſical, do ſtrike your hand and ends

of

of your fingers. Τὸ θερμὸν fire is by *Hippocrates* expounded the Innate Heat of man, but among the Latines generally a Fevor; whence a Fevor may be commodiously defined, *A fire kindled out of the Innate heat of the body, chiefly of the heart, (but secundarily:)* Wherefore that the heart and its constitutive principle, is the part, for the most times hurt, is evident, from the fevorish affection, and life (the proper action of the heart,) being immediately oppreſt, from the inordinate pulſe, a ſudden decay of ſtrength, and the actions of the whole œconomy being very conſiderably, and all at once depravated, and diminiſht. The experience of thoſe, that have put their finger into the ventricles of the heart (the breaſt being ſuddenly opened) of malefactors, who by ſentence have had their head cut off, and have extracted it again thence very hot, doth confirm, that the *Calidum*, or heat of the heart, is a ſubſtance really burning about its chambers, and thence diffuſing flames, through the articles, to the circumference. If on the other ſide, the deſtructive nature of a burning heat be objected, it's not material, conſidering the burning, or flaming of brimſtone, or ſpirit of wine, whoſe purity of flame will not

burn those bodies it touches, especially when through graduation of the air, it may be moderated to any tone of heat or warmth.

Furthermore, I state the *Calidum Cordis*, or heat of the heart, to be a *Bitumen* really ethereal and vital, most exactly defecated or refined, dispersing every where its most subtile and pure flames, and feeding on the most pure and flowring particles of the blood. But since it's difficult, to gain an universal assent, that the nature of blood, excercising so slender a commerce with the air, and limited within the narrow bounds of the heart and arteries, should be convertible into a flame, and a perpetual warmth, it may be rendred obvious by this only instance; Namely, almost all subterraneous waters, that partake of a continual heat, as the water of *Aix la Chapelle*, *Bathe*, and of other hot Baths, since they source out of the deepest and most remote bosoms of the earth, just in the same manner doth the indefatigable soring of vegetative, or living blood, leap very hot out of the bosom of the heart into the arteries, like rivulets; and certainly, that which by natural Philosophers is asserted to be the cause of heat in those waters,

may

may easily be impo.ed upon me, to believe the same, to be the cause of heat in the blood, namely a *Bitumen*, but not *Sulphur*, being immediately extinguisht by water; nor *calx viva* or lime, there being no such fury of heat discoverable in the caverns of the earth, as is requisite for its generation.

Wherefore in *Bitumen* only may be found a heat that is constant, and scarce to be extinguisht; for by water it's apt to be kindled into a higher flame, and to be nourisht by oyl, and oylie bodies.

It is then in the heart where nature hath placed an abounding fountain of vital *Bitumen*, on the purity and continuity of whose flame, life it self doth depend. Neither must it be asserted, that so great a proportion of this doth flow from the heart, as to suffice to protract the life of it, and of the whole structure, for so many years, but that it doth daily attract a bituminous nutriment from the streaming blood, which being kindled into vital flames, is by means of the pulse distributed into the rest of the small chanels of the body. It must also be observed, that all what we eat, or drink, the chyle and the blood do contain a certain proportion of

Bitumen, and as much hereof, as there is abounding in them, ſo much they are capable of being ſerviceable to the heart.

At preſent muſt be explained, what, and of what quality this *Bitumen* is; namely a body grown out of a ſulphureous oyl and a Colophony, into a thick, liquable, and inflamable ſuoſtance. Such by diſtillation it's alſo diſcovered to be in the analytick parts of the blood of a living creature; to wit, an oyl ſwimming a-top the phlegm, and a colophony with a part of fixed ſalt, ſetled in the body of the glaſs-gourd, withall a volatil ſalt paſſing the Alembick with the oyl; which later, namely the volatil ſalt, it is, that adds to the whole mixt body all its ſtrength and power; not unlike Gunpowder, whoſe *Nitro-ſalin* particles being rendred volatil, through virtue of the fire, do aſſume ſo great a force, that they ſtrike any object whatſoever with the greateſt alteration and the ſmarteſt blow imaginable, when in the mean while the brimſtone, and the charcoal-duſt, only ſupply the place of a ſoporous matter. From what hath been ſaid, the manner of the pulſes may commodiouſly be extracted; only conceiving, that the *Bitumen* of the heart, burning until the period of life, and pour'd from the aſcending

aſcending *vena cava* into the left ventricle, doth kindle the blood into a flame, by vertue whereof the nitro-ſalin ſalt being blown into moſt volatile forcible particles, is like Lightning, or Gun-powder diſcharged out of a Gun, propelled as it were by an elaſtick force into the Great and other Arteries.

CHAP. II.

Concerning the differences of Pulſes and their cauſes.

TO deſcribe the difference and variety of the Waters of the Sea, would prove a task leſs difficult, than that of the pulſations of the Heart and Arteries, which are ſubject to be altered by every paſſion, wind, and diſeaſe; though *Galen* indeed counted them, as if he had blown them out at his fingers ends, among which notwithſtanding ſcarce every third difference can be diſtinguiſht by the feeling of a Spider. Wherefore I ſhall only diſcourſe of ſuch, which every one may almoſt diſcern in Fevors.

In the Pulſe I uſe to mind, firſt, the ſtrength or force, next the ſwiftneſs of motion, and thirdly the equality. From the ſtrength a pulſe is called ſtrong or weak; hereunto are accounted a great pulſe (to wit, full and ſtrong) and ſmall, namely empty and weak: the cauſes of the ſtrength of the pulſe I ſtate to be the abundance of volatil ſalt, being vigorouſly and ſmartly diſcharged through the pulſe of the blood, and the ſtrength of the fibres being well nouriſht with the moiſture of the brain. On the contrary, the defect of ſalt, and emptineſs of the fibres cauſe a weak pulſe. Here it's worthy of your obſervance, that the pulſe in ſome fevoriſh Patients is found much ſtronger, than it was in their ſtate of health: and, what is more, in ſome, who were reduced to ſo low an ebb of ſtrength, that they were ſcarce able to keep death a day from their door, I remember, their pulſe would beat the tops of ones fingers ſmartly, which notwithſtanding in my opinion, ought not to be called a ſtrong pulſe, but violent; for the vital faculty being irritated, by a corroding and reverberated kind of ſalt, is forced into thoſe violent pulſations; whence falling at laſt into a very ſmall and moſt quick pulſe, is immediately

diately attended with an *Aſphyxia*, or ceaſing of pulſation. It is an eaſie buſineſs, to diſtinguiſh a violent pulſe from a ſtrong; the former doth come full to the fingers, the later empty. Secondly, I have oft met with a weak pulſe in ſuch as lay ſick of Fevors, that they ſeemed not to be able to hold out two days, which notwithſtanding have for a fortnight, or twenty days, ſtrove very ſucceſsfully with the diſeaſe. This pulſe proceeds from a thick and moiſt blood, which by a continuated rarefaction, and reiterated circulation, being advanced to a higher degree of concoction, doth revive the vital faculty, whilſt in the mean time, there hath been ſuſtained no great loſs of volatil ſalt in thoſe weak pulſations. I have many times taken notice of this caſe in women, that lay ſick of Fevors; wherefore it is warily pronounced by *Hippocrates*, *Aphor.* 19. *lib.* 2. τῶν ὀξέων νυσημάτων, ἡ πάμπαν ἀσφαλέες αἱ προδιαγνώσιες ἔστε τὸ θανάτε ὀργὴ ἔστε τ ὑγιείης, *i. e.* The predictions of life and death in acute Fevors are not always certain and without doubt.

That we may avoid being miſtaken, we are to diſtinguiſh; a pulſe that's really weak, is empty and ſmall, and for the moſt part inequal in motion and weakneſs, neither did

did it differ much from that degree ſince the beginning.

Under the motion of pulſation, I take a ſlow and ſwift pulſe, likewiſe a thick and rare pulſe. A ſlow pulſe is known by moving ſlowly from the *ſyſtole*, or a contraction of the pulſe, to the *diaſtole*, or a widening or dilatation of the pulſe; and again from the *diaſtole* to the *ſyſtole*. A quick pulſe is known by its quick pace from the *ſyſtole* to the *diaſtole*, and ſo reciprocally. A thick pulſe to me is, which is perceived by the finger by its frequent beatings, or retreats; a rare pulſe contrariwiſe. Here may be noted, in my apprehenſion a pulſe can ſcarce be diſcovered ſlow and thick at once, when a ſlow pulſe neceſſarily doth not return frequently or thick, becauſe it's ſlow; but according to the common maxim, a thick and ſlow pulſe may happen together, becauſe it is called thick, in reſpect of the interval or reſt between the *ſyſtole* and *diaſtole*, namely, which returns in a ſhort ſpace of time; but a pulſe may move ſlow from the *ſyſtole* to the *diaſtole*, ſo that there is but a ſmall interval between, before it returns from the *diaſtole* to the *ſyſtole*, and thence it's termed thick.

But taking the matter into farther consideration, there is scarce any such pulse, as a thick or frequent one, according as it's commonly described; neither is there a rare pulse, because there is no interval of rest between pulsation; for conceiving, that the pulse is like a reciprocal swelling and falling, like the tide of the sea, there can only be inferred a point of reflection, namely, as soon as it swells up, the next moment it falls again, and as soon as it's fallen, the next minute of time it swells again. Moreover, this rising or swelling is attended with an impulse from the heart, by means of the constriction of its fibres, whereby like waves, besides the forementioned swelling or turgescency, the blood is propelled through the pores of the body, out of the arteries into the veins. Wherefore that I might not beyond necessity burden my self in my practice with notions, I scarce am used to take notice of any thing else, in the motion of the pulse, besides its swiftness and slowness, neither do I stand much whether it be hard, or hot, or pricking, since this rather relates to the altered qualities, than the pulse. Thirdly, It is to be observed that those, whose pulse being naturally full, strikes quick, their vital faculty

culty is very weakly; wherefore in women and children the arteries ſtrike quick, but full. Fourthly, In malignant Fevors the arteries do oft move ſlowly, in ſuch a manner, that one might judge them free from all putrid heat; but this doth not happen, unleſs death be ready to follow within a day, two or three.

The natural ſwiftneſs of pulſation (not in ſick people) muſt be imputed, partly to the abundance of volatil ſalt, but ſuch as is not cloſe and compact; for as ſoon as it arrives to the ventricles of the heart, it's apt to be fluſht into too volatile particles, and ſoon after, the ſalt being ſo copious, follows immediately from the other parts of the ſalt, whence another pulſe is ready at hand; partly it's to be imputed to a *Bitumen*, that is eaſily inflamed, which quickly kindles and is kindled, whence happens the frequency of the pulſe.

By the way, a ſmall queſtion might here be moved, whether the pulſe beating quick in Fevors, there paſſeth more blood through the heart, than when one is in a ſtate of health? Firſt, It muſt be agreed upon, whether in every dilatation the heart is filled full of blood, and in every conſtriction it be quite emptied; ſome defend the affirmative part,

part, which to me doth not at all ſeem plain; for thoſe, whoſe pulſe at one time beats full, and at another empty, it muſt neceſſarily be argued, that at one time the pails of the heart muſt be ſwelled up with a greater quantity of blood, and at another with a leſſer; and from the conſequents it's evident, that reciprocally in divers pulſes, there muſt be expelled a various proportion of humors. Secondly, Since it may be obſerved, that a large *diaſtole* of the heart is ſometimes the next moment followed by a ſhort and weak *ſyſtole*, as appears out of the ſwelled *diaſtole* of the arteries of the wriſt, or any other part, there oft following a ſhort and weak *ſyſtole*, whence it's deemed, there is more received into the receptacle of the heart, and leſs expelled, ſo that oft a proportion that's admitted by one *diaſtole*, is expelled in three or four *ſyſtoles*.

To anſwer to the queſtion, we aſſert, that the blood is not circulated nothing near ſo rapidly or quick in malignant Fevors, as it is in the ſtate of health, becauſe the pulſifick faculty of the heart is languiſhing; neither is the *ſyſtole* of the arteries or heart made with ſo much force; but in putrid Fevors, the *ſyſtole* and

diaſtole

diaſtole being violent, the blood is transfuſed ſomewhat ſwifter, than in a healthful ſtate. Here is to be obſerved by the way, if a ſwift pulſe be perceived to go ſlower a day before, and the day after to grow ſwifter, a malignity is to be ſuſpected.

The third particular worthy of obſervation is, the equality or inequality of the pulſe, in reference both to motion and ſtrength. Wherefore in reſpect hereof a pulſe is ſaid to be equal, or inequal in motion, to wit, ſwiftneſs and ſlowneſs; and in ſtrength, namely fortitude and weakneſs. The equality which Authors are wont to apply to a thick and rare pulſe, likewiſe to the tone or muſical rithme, we paſs by, being rather apt to occaſion confuſion to the practiſing Phyſician. To unequal in motion are accounted the *dicrotus* or anvile-pulſe, *capriſant* or goat-pulſe, intercedent, and ſome others.

A ſtrong pulſifick faculty, and not depraved, likewiſe a temperate mixture of the blood being well depurated from heterogeneous particles, are both ſome cauſes of an equal pulſation. On the contrary, blood that's unequally mixt with the vital *Bitumen*, and ſeveral ſorts of ſalts, occaſions an unequal pulſe, both in reſpect of motion and

and ſtrength. As for other differences, proceeding from the force of paſſion and other procatarctick cauſes, we refer to another place.

CHAP. III.

Of what is generally to be obſerved in Urins.

SInce the Urine for a more certain preſage muſt give place to the pulſe, we have thought fit to diſcourſe of this after the other.

Through the abuſe of piſpot-gazers, and ſome Phyſicians, that imprudently pretend to tell wonders, the doctrine of Urines among ſome is fallen into diſgrace; nevertheleſs ſince it makes an ample diſcovery of the diagnoſticks and prognoſticks of diſeaſes, it ought not to be diſmembred from the art of Phyſick. Firſt, we ſhall ſet down, what Urine is, afterwards what particulars are to be obſerved in it. To me the Urine ſeems, to be a liquor melted from the volatil and fixt ſalts, likewiſe of ſome excrementitious phlegm, diſſolved in the *ſerum* or water of the blood, which being throughly filled and

and impregnated with the foreſaid contents, through its weight tending downwards, is poſted to the kidneys, thence as if it were diſtilled by deſcent, it falls down by drops towards the bladder. But that the nature of urine may be made more plain to you, ſome particulars are to be taken from the conſtitution of the blood, and propoſed here. Thoſe volatil ſalts I conceive to be the principal efficient of concocting the blood, adding to it a ſcarlet tincture, ſweetneſs, homogeneity, and fluidity, in which ſhape the blood arriving to the pores of the parts, that are to be nouriſht, doth deſert the ſalts, which return with the ſuperfluous blood to the veins and lymphatick chanels, that afterward disburden themſelves into the *emulgents*. That thoſe ſalts do not only illuſtrate the blood with a tincture, but likewiſe the urine, ſhall be demonſtrated by ſight. You ſhall find, that ſpirit of *ſal armoniack* ſcarce differing from *ſpirit of Urine*, or *ſpirit of Hartshorn*, or *ſpirit of Soot*, a drop or two being dropt into whitiſh, drabbiſh and undigeſted urine, ſhall immediately concoct it into a golden or vitrinous colour, and an excellent conſiſtency. But if you effuſe an acid ſpirit, that's forced out of a fixed ſalt, you ſhall ſee it turn

turn more drabby, more crude, and of a heavier weight. In the ſame manner, if you pour ſome drops of thoſe forementioned volatil liquors into a ſmall quantity of blood, though crude and phlegmatick, you will digeſt it into laudable blood and preſerve it warm and florid; but upon dropping ſome *oyl of Vitriol* into it, it turns immediately into a curd, the *ſerum* or whey is depreſſed downwards, and aſſumes a purple red colour. *Spirit of Nitre* doth pervert the redneſs into a whitiſh or aſh colour, but doth not precipitate the whey, ſuffering it to ſwim a top. Upon the further purſuit of the matter, I dropt a drop into a large proportion of blood almoſt coagulated, whereby almoſt in a moment the tye of the coagulative particles was diſſolved, and indued with a ſhining luſtre, not at all inferiour to the beſt digeſted blood. Neither doth it only from this external uſe deſerve to be termed ſo admirable, but that in a ſhort time, being uſed inwardly, as I have oft made trial, it hath ſingularly digeſted the crude blood of Aſthmaticks, Scorbuticks and of worſer habits. A conſiſtency between thick and thin, ſignifies a vigour of concoction, chiefly to be aſcribed to the volatil ſalt, living in the vital *Bitu-*

men: The causes of the thinness or tenuity of urine in those, that are sick of a Fevor, are the scarcity of volatil and fixt salts, not being separated from the torrent floating through the great vessels, also the drying away of the mucilage of the blood, through the heat, or its dissipation through the pores. The thickness of urine is occasioned by the whey or *serum*, imbibing too great a quantity of salts and thick mucilage. Touching the matter of the *hypostasis*, or settlement of the urine, there hath hitherto but little certainly been stated among Authors, though most are of opinion, it proceeds from the superfluous humour of the third concoction. To me the sediment appears to be a mucilage, partly imbibed by the *serum*, or whey within the vessels, partly deterged from the slimy substance of the intern tunick of the ureters and bladder, wherewith they are liquored, to prevent their most exquisite sense be not hurt by the urine, that flows by. This mucilage if you examine the Chamber-pot, shall be found to be a glutinous, thick and slippery slime; moreover, that it's dissolvable by heat, and apt to be thickned by cold like phlegm, may be observed in turbid urines, which as long as they continue warm,

warm, after they are made, are clear and perſpicuous, but a little after growing cold, are turned into turbid and dark, being deprived of the energy of the particles of hot volatil ſalts, that diſſolved the ſlime; for if you do but hold the urinal a moment to the heat of the fire, or hold it in warm water, they will reſume their former ſhape of clearneſs. Bubbles that oft ſwim a top the ſurface, I judge ought not to be imputed to a flatuous, but lixivious conſtitution of urine; for aſhes, ſoap and other lixivious things, being diſſolved in water, render it ſubject to turn frothy and bubbly with the leaſt ſtirring.

The colour, conſiſtency, and contents are chief univerſals, whence a Phyſician may extract, what preternaturals lye hidden in the body. The colour diſcovers the active qualities of the ſalts, the conſiſtency the ſtate of the ſerum or whey, and the contents the quantity of the foreſaid ſalts and other excrements, that had performed their office; a further and particular explication of all theſe, relating to the kinds of Fevors, ſhall be reſerved to the ſequel of the book. Laſtly, it is to be noted, that in the contents are included the *enærema* and *hypoſtaſis*.

CHAP. IV.

Concerning the true and Spurious Eſſence of a Fevor.

IN the firſt Chapter we had hinted at the definition of a Fevor; what concerns its explication, we have partly referred hither. That a Fevor is a derivative from the nature of fire, is abundantly ſuggeſted from its deſtructive manner of acting, moſt fierce heat, the tongue and roof of the mouth being cruſted with a black ſmoak, likewiſe from other ſymptoms thence proceeding, as thirſt, dryneſs and roughneſs of the skin, and inflammation of ſeveral parts. Here the Reader is to aſſume, that the vital *Bitumen* of the heart and the whole body, being kindled into a fire, is the diſeaſe or Fevor, or rather that the fiery diſtemper of the heart and the whole body or part, is the diſeaſe; but not the preternatural heat, being that's rather to be counted a ſymptom, immediately flowing from the diſeaſe, in no wiſe differing from the manner the heat emanates from the fire. Wherefore the definition,

tion, which is extant among Academick Authors, as *Fernelius*, *Sennertus*, and others, ought juſtly to be rejected. To wit, *A Fevor is a heat againſt nature, kindled in the heart, and from thence by means of the ſpirits and blood, diffuſed throughout the whole body, and doing hurt to all the natural actions.*

The objections againſt this definition I offer you in theſe poſitions. Firſt, I aſſert, that the eſſence of a Fevor doth in no wiſe conſiſt in an univerſal heat; nor ſecondly, that the heat, which attends a Fevor, doth not altogether ariſe from ſparks glittering in the heart. The argument that confirms the former, is taken from the *genus* of a Fevor, which is ſtated a diſeaſe; but a diſeaſe is ſaid to be the conſtitution of a part hurt or injured, which kind of ſaying doth not at all agree with a preternatural heat, that depends on the burning fixt *Bitumen* of a part; or oft on miaſms or ſteems, blown from the heart (the receptacle of the fire) to all or moſt parts of the body; but thoſe torrid miaſms are not to be taken for the diſeaſe, but cauſes, that in proceſs of time, through their heat, may occaſion a diſeaſe. Here may be offered a probable objection, that a Fevor

is the kindling or heat of the influent ſpirits of each ſingle or more parts, whoſe hurt is to be imputed immediately to the heat of the ſpirits, whence a Fevor may juſtly be judged a heat. Hereunto muſt be replied, that the name of a part of the body can in no wiſe be given to the ſpirits, becauſe they flow continually, neither are they in any manner permanent, but are aſſigned for the animation and nutrition of the parts, and for that reaſon their diſtemper ought not to be taken for a diſeaſe; if notwithſtanding the ſubverſion of the temperament of a part ſhould flow from a tumult of the influent ſpirits, and that thence they ſhould be incapable of performing their offices, nevertheleſs becauſe it's a mediate affection, and to be derived from the burning of the ſpirits, it's not to be taken for a diſeaſe, but a cauſe. Secondly, If from the general opinion you have a mind to inſtance, that the putrid heat of all the parts of the body is a Fevor, to wit a continual putrid one, ſuppoſing likewiſe, that the ſaid heat is riſen out of the blood only, being through its means conveyed to the ſanguin parts; I anſwer, it ought not be inferred a diſeaſe (ſince the blood alſo, becauſe it's a fluent matter, cannot juſtly deſerve the name

name of a part) but a cauſe of a diſeaſe, or the vehicle of it. Thirdly, The bones, cartilages, and ligaments, are not ſenſible of heat, neither are they ſubject to receive any putrid heat, becauſe in a Fevor they are ſeldom or never obſerved to be taken with a putrefaction or rottenneſs; how can then a Fevor be termed a preternatural heat of all the parts? Likewiſe, Fourthly, Why ought the name of Fevor to be attributed to a ſevoriſh heat more than to a ſhaking, or fevoriſh coldneſs in the beginning of a paroxyſm of a Fevor, both the former and the later flowing equally as ſymptoms from a Fevor? Fifthly, An univerſal heat is erroneouſly aſcribed to a Fevor, for in a lipyrious Fevor, a torrid heat doth torment the internal parts, though the externals are cold; moreover it oft happens, that the hands and feet are ſtiff of cold, and the entrails do in a manner glow with a burning heat. Furthermore, it may be obſerved, that a Fevor doth ſometimes only haunt one ſingle part, as the foot or hand. Neither have I forgotten a certain Fevor, whoſe heat extended no further than the head and face. Hereunto add, that thoſe particular Fevors are not only inferred, to be ſuch, becauſe of the preternatu-

ral heat, but alſo by reaſon of the preceeding cold, ſhaking and ulcerous laſſitude. Sixthly, thoſe that ſwell ſo much with the Doctrine of Fermentation, they do not altogether affirm, that it is a preternatural heat that conſtitutes a *Fevor*, ſince the forementioned heat doth take its riſe from a heap of influent ſpirits, ſtriving to expel humours and ſuch ſmall bodies as are annoying; which heat ought therefore rather to be judged natural, than againſt nature.

In the ſecond poſition we maintain, that the heat, that attends a Fevor, is not always kindled in the heart, as if the primar hearth were there, which aſſertion is proved from the kinds of ſymptomatick Fevors; for the Fevor that ſurpriſes a wounded patient, or one that's detained with an inflamation of an entrail, as the Spleen, Liver or Kidney, certainly it's not firſt kindled in the heart, but in the part affected, whence afterwards it's diſperſed throughout the whole ſtructure. Secondly, If the heart were the only brand of fevoriſh heat, the blood that paſſeth through its ventricles ſhould retain a mark of being burnt, and undergo ſome change of tincture; when on the contrary, thouſands that have been bleeded in Fevors, their blood that was extracted hath appeared

ed to the eye to be of a pure ſcarlet and florid, until the fourth, and oft until the ſixth and eighth day.

In the next paragraph I have thought fit, to pleaſe my ſelf with the examination of the vulgar opinion, concerning the common ſeat of continual putrid Fevors, intimating it to be the blood ſeething in the veſſels, and ſtained with putrefaction: but how groſly this rabble of Phyſicians is miſtaken, may be extracted from what ſhall be propoſed: Firſt, If the ſprout of a continual Fevor were ingraffed on the blood, it would not be ſo refractory to cure, but conſiſting of fluid, and moveable elements, by means of alteratives, purgers, diaphoreticks, and emptying the veſſels by opening a vein, might in a ſhort time be reduced to its former purity and temperament: moreover, through one nights ſeething of the blood, nature doth oft expel thoſe thin little bodies, that float in it, and the groſſer it caſts forth into puſtules, botches and other ſuch tumors. Secondly, I cannot grant, that what is ſtirred by motion, and continual flowing as the blood is, that it is eaſily taken with putrefaction; for being full of vital ſpirits, and living heat, it's held in a continual motion. Thirdly, Until the third,

third, fourth, ſixth, eighth or tenth day; computing from the beginning of the diſtemper, according to the degree of the height of the Fevor, the blood at the firſt phlebotomy is extracted pure and florid, as I have obſerved in hundreds; whence it's evident, that the primar matter of putrefaction, and the ſeat thereof, is erroneouſly placed in the blood, though afterwards paſſing the entrails, it be ſtained with a malignant quality, loading it ſelf thence with hot Miaſms and Salts. Fourthly, pure phlegm, or veiny gelly, being watered with an immoderate quantity of a pale, green, and blew lymph or whey, ſince it makes two thirds of the blood, in the veins of thoſe, that are troubled with the Dropſie, Green-ſickneſs, and other kinds of diſeaſes, why is not that blood, which is ſo heterogeneous, and ſo far remote from a temperature (moiſture abounding and the plurality of particles breeding putrefaction) always forced into a fevoriſh heat? And on the contrary, why are hot and dry temperaments, where choler is abounding, conſtantly ſo inclinable to putrid Fevors, whereas dryneſs doth ſo particularly reſiſt putrefaction? Summarily, the blood according as I have aſſerted in the premiſes,

ſince

ſince upon no pretence it's to be accounted among the parts of the body, doth utterly exclude it ſelf being capable to be a ſeat, place or part affected. If peradventure you doubt, that I have hitherto receeded from the path of the received doctrine, ſtating the heart or other entrail the ſeat in Fevors, you have the liberty to take it from the fountain, what is to be concluded concerning the matter. *Avicen. fen.* 1. *lib.* 4. *tract.* 2. *cap.* 43. dictates thus, *Dicamus quod Febris ſanguinis eſt Febris putredinis, & Febris calefactionis & ebullitionis,* that is, Let us ſay, that a Fevor of the blood is a Fevor of putrefaction, and a Fevor of heat, and ebullition. Here is to be noted, that the blood is inferred the ſubject, matter, and ſeat of a putrid Fevor. Alſo *Galen. lib.* 2. *de Criſ. cap.* 12. *Manentibus igitur in venis humoribus, continuæ ex ipſis Febres generantur,* that is, The humors remaining in the veins, continual Fevors are engendred out of them. Likewiſe, *Ætius tetrab.* 2. *Serm.* 2. *cap.* 74. *Putreſcentes igitur humores, aut intra vaſa arctati, continuas & nunquam intermittentes uſque ad perfectam morbi ſolutionem Febris efficiunt,* that is, Whereſoe humours putrefying, or ſtreightned within the veſſels, do cauſe continual

tinual Fevors, and never intermitting, until the perfect ſolution of the diſeaſe. Here by the way obſerve, though according to *Galen*, Fevors are ſeated in the veins, by their name Arteries are alſo deſcribed, as *lib.* 1. *de Criſib. cap.* 7. it's by him more largely expreſſed. *Febres omnes ſunt paſſiones venarum; itaque in Febribus omnibus, quoniam venoſi ſunt generis paſſiones, nam arterias in hoc genere comprehendimus, ad urinas præcipue attendere oportet:* the Engliſh is, All Fevors are paſſions of the veins; wherefore in all Fevors, becauſe they are paſſions of the veiny gender, (for we comprehend the arteries alſo in this gender) we ought chiefly to heed the Urins.

On the other ſide, they have deſtined the ſeat of intermittent Fevors to be without the veſſels, as appears here and there by the writings of *Galen* and *Avicen.* Notwithſtanding I can ſcarce apprehend the foundation of theſe ſeats, wherefore I deſire to be ſatisfied in this doubt, whether continual Fevors are ſaid to bud forth in the veins, becauſe the blood, that leaps out upon phlebotomy, doth appear hot to the touch, and ſhews deep red being mixt with a blew, milky, or yellowiſh whey? But this blood is not different from any other, that's extracted

tracted in an intermittent Fevor, or any other diſeaſe. And whether the difference of ſeats is expounded to be ſuch, becauſe the blood within the veſſels, having an immediate commerce with the heart, is capable to foment a ſtrong heat, whereas entrails, that are more remote from the heart, do only by fits profuſe thoſe putrid and fevoriſh ſteems, and under that ſhape do occaſion an intermittent heat? Certainly not. Moreover, the entrails being tyed to the veſſels, are not leſs commodiouſly ſituated, by means of theſe ſmall chanels, that tend directly to the heart, to foment a fevoriſh heat, than if the cauſe were engendred within the foreſaid veſſels: or whether, becauſe the veſſels are of a juſt capacity, wherein they may receive ſuch a quantity of fevoriſh matter, as may ſuffice to nouriſh a Fevor without intermiſſion, whereas the entrails are ſtated to be ſtreight, and not provided with a hollowneſs to retain matter enough.

On the other hand, the entrails according to what the thing requires, ought to ingurgitate a larger quantity of matter, which might ſuffice to protract an intermittent Fevor, to ſome months and years, as doth oft happen. But to touch the knot of

of the difficulty, the cauſe of the continuation, intermiſſion, remiſſion, and intention of Fevors, is not to be imputed ſo much to the quantity, as the quality of the fevoriſh matter, as hereafter ſhall be treated more at large. In the precited definition, the heart is idly ſtated the part primarily affected; for thence would follow, that the greater part of Fevors ſhould be mortal, becauſe the compoſure of its temperament being once ſubverted, is not eaſily reſtored. Secondly, Suppoſe an inflammation of the Liver, or other entrail, attended with a Fevor, which do you think the part primarily affected, the Heart or Liver?

CHAP. V.

Concerning the fopperies of Fermentation.

ALmoſt every Barber and Plaſter-ſpreader have got the knack, to buzze every patient in the ear, the ſong of fermentation, and know how to fit the tone of it to every diſeaſe, but chiefly to a Fevor, illuſtrating the expoſition thereof with this commentary, that the blood fermenteth, and the humors are in a fermentation, likewiſe

wiſe the ferment of the Heart, Spleen, Liver, and it may be of the Fundament too, if they go not orderly to ſtool, is depravated; moreover, if a Corn of the Toe doth but ake, the diſtempered ferment is the cauſe of it. Summarily, fitting the word *ferment* to every diſeaſe, cauſe and ſymptom, they conceive the caſe to be very well handled, and thence tell the Patient, they will expel the diſeaſe by correcting the ferment, and ſo, as if they had done their buſineſs mighty well, they ſend the Patient home ſwelled with hopes. Concerning this abſtruſe Philoſophy, borrowed from certain theorems of the Wine-preſs, and chymical notions, *Anthonius Guntherus*, *Theobaldius Hoghelandius*, *Felicianus Betera*, *Conringius*, *Martinus Kirger*, and others have profeſſedly treated, whoſe Treatiſes if you peruſe, you will find the word *fermentation* to ſerve in divers ſignifications; the one in a large ſenſe gives the deſcription of it, not at all different from Peripatetical mixtion, excepting, that this performs its task by qualities, the other by action and reaction. But *fermentation* in a narrower ſignification, as it relates to fluids, is ſtated an effervеſcency of any liquor, tending to concoction. At preſent we will examine,

whether

whether a Fevor be a fermentation, or effervescency of the blood.

To the resolving of this, we must resume from what hath been said in the foregoing Chapter, that a Fevor, as it is a disease of the body, doth necessarily inhere in a part, as its subject and foundation; but the blood cannot perform the office of a part; therefore neither a Fevor or fermentation can be properly attributed to it. Secondly, Neither can the blood fermenting be probably conceived to be the continent cause of a Fevor, because its fluid mixture is absorbed in a few days, whereas a Fevor is protracted to some weeks. Suppose a fevorish Patient, to contain four and twenty pints of blood in his vessels, whereof a quarter of a pint is consumed every day by abstinence, and dissipated away through the pores into vapors, and some days a whole pint, or at least three quarters, are drawn off by phlebotomy; for it's very familiar amongst the *French*, the first and second opening of a vein, to extract a whole pint of blood, and every bleeding afterward (which is commonly every other day) to take away two Porringers, containing three ounces a piece: by this computation the whole mass should be drawn off

off in two weeks or leſs, and conſequently the *fermentation* muſt be quieted and ſtopt, and the Fevor expelled. But on the contrary, if you ſhould extract blood forty times (as I have oft obſerved in *France* they have done) the height of the heat will not be half a degree abated, but rather augmented. Who would then maintain the blood, boiling through fermentation, to be the cauſe of a Fevor? However this experiment is obſerved to be true, if you take off the third part of any liquor that is a fermenting, whether of Wine, Beer, or any other mixture, it will immediately be taken off from working; but ofttimes the blood is tapt off to the half, and ſometimes to the laſt fourth part, without the leaſt quieting of the fermentation, if I may call it ſo. Poſſibly you reply, that according as the veſſels are emptied by bleeding, ſweating, and other torments, they ſwell up again by the food and drink, that's daily taken. On the contrary, there is a thin Diet ordered to ſuch, as are in a Fevor, neither do moſt in the whole courſe of a Fevor, allow their ſtomach ſo much, as whereout the ſanguifick faculty may engender a pound of blood: add hereunto, that their appetite for fourteen or twenty

days is quite dejected. But you reply, that they take as much food, as anſwers, what is conſumed; to this I return, that the blood, which is daily ingendred, and newly admitted into the veſſels, either it's pure, or ſtained; if the former, then it ought to dilute, and temperate the fermenting maſs, which it doth in no manner do; if the later, it is not to be doubted, but that it hath contracted its ſtain, from the concocting and depurating entrails; whence follows, that the primar and principal cauſe is not to be attributed to the blood, but the entrails. Thirdly, It's confirmed by experience, that *fermentation* doth happen to any mixt liquor, and ſoft compoſitions, as paſte or dow, electuaries, and others, which is obſerved to be a mild working of the ſulphurous and volatil-ſalin particles, exerting a temperate heat, that attenuates, expands, and diſſolves the whole eſſence, and ſeparates the ſuliginous-ſalin parts from the homogeneous ones, by ſubliming them into a ſharp ſalin ſcum; the tartarous and fixt ſalin particles it precipitates into a mucid and ſlimy mud. This being obſerved to be the ſignification of *fermentation*, according to the true intent and meaning of thoſe, that impoſed it on things, that were

to

to be fermented, it ſeemed indeed a very ſimple and idle aſſertion, that whilſt the blood doth ſeeth, boyl, hiſs, and burn the hand of him that toucheth it, and occaſion a black and ſharp ſteem, being an effect of fire, on the mouth and tongue, that all this ſhould depend on a *fermentation*, and mild heat of the blood. Doth not *fermentation* always tend to concoction, but a Fevor oft to corruption and death; and that one and the ſame word ſhall ſignifie two contraries, is it not an abſurdity? To expreſs alteration, mixtion, generation, corruption, calefaction, and what not, by the word fermentation, (a word wondrous pregnant) is to ſet limits to all phyſical re-ſearches and inquiries. Neither do they detract leſs from the art of Phyſick, who aſſert a vitiated ferment the cauſe of a Dropſie, Phthiſick, Pleuriſie, and of the whole train of diſeaſes; on the correcting whereof (to wit the ferment) every old Wife and Barber-ſurgeon ſhall ſay the ſtreſs of the cure doth lie: and is it not then lawful, for this Tribe to vye with fermentitious Phyſicians, yes and exceed them? How formally and cunningly at this rate is the diſeaſe, cauſe and cure, propoſed by every Gliſterpipe? What is it at laſt come to? What neceſſity is

there, to apply ones ſtudy to Anatomy, Botanicks, Phyſiology, Pathology, and a thouſand other things? O wonderful Head-pieces! You will notwithſtanding by the way admire, if this notion of *fermentation* be only aſſumed as a *phænomenon* or ſuppoſition (for the thing it ſelf is not yet agreed on) by thoſe that are ſomething higher advanced in Learning, to ſhew themſelves more dextrous in illuſtrating the cauſes, extracting of indications, and in the method of curing, yet it is not to be doubted, but that they ſhip off a greater troop of ſick in *Charons* Boat, and deſerve a greater fraight than the putrid Phyſicians.

But to the buſineſs, let us now be at leaſure, to examine the manner and method, that *Fermenters* undertake the cure of continual and intermittent putrid Fevors, what indications they anſwer unto, and wherein they receed from putrid Phyſicians. The *Indicantia*, and *Indicata*, ought to be ranged in this order. The blood too much inraged, or too little moved by *fermentation*, and a vitiated ferment, are the chief *Indicantia*; thoſe things that promote, or quicken the too ſlack *fermentation*, and temperate it, when too violent, and reduce the ferment, when receeded from its tem-

pera-

perament, are the *Remedies Indicated*. The vital faculty languiſhing, and deprived of its ſpirits, doth indicate a cordial and reſtorative medicine. The animal faculty being broken, through want of many nights reſt, muſt be relieved with *Opiats*. The Belly if forgetful of its office, muſt be rowſed up with a ſtimulating ſuppoſitory, or laxative glyſter: neither are the urgent ſymptoms of a two ſwelling fermentation, to be neglected. A Phrenſie that proceeds from ſulphurous ſteems, fuming up from the fermenting maſs, muſt be allayed by means that revell or draw back from the Brain. Aſtringent medicines bridle a looſneſs, and enormous vomiting. Thus far in general, concerning *indications*, taken from their theorems; nevertheleſs theſe being waved, the *Fermenters* do follow the method of cure of the putrid Phyſicians; in poſting away their Patients, to the place of their fore-fathers, as ſhall be recited immediately. That it may be phyſically illuſtrated, we ought to premiſe their practice, being fitted to a particular ſick perſon; whoſe age, ſexe, temperament, former cuſtom of living, ſeaſon of the year, tenor of their Pulſe, ſtate of Urine, urgent ſymptoms, occaſional and procatarctick cauſes,

and manner of the first assault of the Fevor, what symptoms attended, what symptoms arrived afterwards, manner of breathing; the habit of the Hypochonders, Stomach and Belly; the manner of the look of the sick man, his manner of speech, what habit of body, what usual evacuations are suppressed; whether the Fevor be essential or symptomatick; whether first come, or a relapse; what disease he was troubled with last, what remedies were applied before the Physicians coming, and many other particulars, that are to be distinctly proposed, all which I say ought to be represented to the serious meditation of any Physician, that is to undertake the cure of a Fevor. But they receed so far from these necessary animadversions, that being sent for to a Patient, having only felt his Pulse, they look upon the Urine, and make some little inquiry concerning the state of his Belly, whether loose or costive, neglecting all other necessary informations, and apply themselves immediately to prescribing; and their first business is, to put the Belly in order, which they endeavour by this following form of a glyster; but I am to advertize you before, concerning the custom, that young Physicians, that are newly come

come from the Univerſity, diligently repair to the Apothecaries ſhops, for to inform themſelves with the forms and receits of the Elder Phyſicians, and being acquainted with them, it happens thence, that every Phyſician is furniſhed with the ſame examples or forms of remedies, neither doth the one go an inch from the road of theo ther. Wherefore I ſhall collect you the moſt received forms, throughout the whole courſe, for to remove a fevor, compiled by our modern ones; afterwards how ſucceſsfully our age makes uſe of them, I ſhall particularly obſerve. The preſcription of a glyſter according as it's commonly found in the Shops, is this.

℞. *Decoct. commun. pro clyſt: vel juxta alios.*
℞. *Decoct. Emoll. com.* lib. j.
Elect. lenit. ℥ j.
Ol. com. vel viol.
Mel. Mercur. vel Roſ. ana ℥ j. *vel* ij.
Sal. com. q. s.
m. f. Enem.

Some there are, that inſtead of common Salt put in Salt-peter, or *Sal-prunellæ*, from half a dram to a dram: which for its

detergent and cooling quality, is far beyond the other; and indeed *Cryſtal mineral* being added to any ſort of glyſters, is far more beneficial, becauſe it agreeth ſo very well with the temperament of the Guts; on the contrary, Sea-ſalt being of a drying, inflaming, and irritating faculty, is very offenſive to the Guts: For this reaſon the Antients made uſe of it as well inwardly, in Pills, thick Syrups, Glyſters; as outwardly in Oyntments. Some among the *Fermenters* do extreamly oppoſe the giving of purges, or laxative glyſters in Fevors, becauſe they provoke the corrupted excrementitious humours to ferment, whoſe ſteems piercing into the veſſels, do diſturb, and augment the *fermentation* of the Fevor. On the other ſide the putrid Phyſicians make this reply to them, that glyſters doing their work quick, and without the Veſſels, cannot tranſmit the leaſt breath of heat, nor blow up any ſteems, the valve of the *Colon* putting a ſtop to their paſſage. Laſtly, That it is a ready means to cleanſe the body, without weakning or fermentation of the humours corrupted without the veſſels, which otherwiſe in proceſs of time, might largely contribute to the malignant mattter within the Veins; for it is the judge-

judgement of many, that ſome Fevors, which at the beginning were only hurtful through their putrefaction, are changed into malignant and mortal, by reaſon the putrid drabby ſettlement, which lay hidden in the folds and coats of the guts, is regurgitated into the veſſels, and that therefore purging glyſters once or twice repeated, ought to be neceſſarily put into uſe: afterward they cauſe a glyſter of milk and ſugar, to be adminiſtred once every day, to ſoften, deterge, revell, cool, and evacuate. There are thoſe (but are ſcarce in their wits) that maintain, the foreſaid glyſter ought to be made out of crude milk, and to be applied cold, conceiving that by boyling, the volatil energetick particles might otherwiſe be evaporated into the air. But they are unmindful, how hurtful things are to the membranous parts, and the guts, that are actually cold, and that they repel thoſe putrid vapours, that ſteem out of the hidden places of the meſentery, and guts, to the heart, and the brain. Others are of opinion, one third or half the proportion of water ought to be poured to the boyling milk; afterward putting ſugar to it, they adminiſter it warm. Others only ſimply order milk boyled, and ſweetned

ned with ſugar, from half a pint to a pint.

The lower region of the body being thus cleanſed, two, four, or ſix hours after, bleeding is to be celebrated in the right arm, which *Fermenters* do ſharply oppoſe, becauſe it doth exhauſt the ſpirits and matter of life, which failing, the *fermentation* and concoction are thereby much diſturbed, and the heterogeneous particles getting the upper hand, is a preſage of an unlucky *criſis*. However the greater number of this Sect do not think it ſafe, to vary from putrid Phyſicians in this matter, becauſe almoſt all Fevors are too exorbitant in *fermentation*, and the ſpirits oppreſſed by heterogeneous particles, the heat being too much heightned, the skin being conſtipated, and lockt up through the ſoot of the pores, all which evils bleeding doth very much abate. Theſe reaſons ſwaying with the prudent, they command a vein ſhould be open'd twice, thrice, or four times, according to the degree of plethory; others tap off the blood every third day, ſome every other day, until together with the ſoul they have drawn out the whole.

In the next place they are to bend their force againſt the matter, fermenting too fiercely, by giving Cordials and Diaphoreticks,

reticks. In this particular the *Fermenters* and the *putrid Physicians* are differing, the later relieving the impared vital faculty only with cold cordials, as shall be made known to you in another place. The forms of sudorifick Cordials, as they are hung on the Apothecaries files, and according as they have been prescribed by the more famous sort of Physicians, shall now be put down.

R. *Aq. ulmar. citr. tot. lujul. scabios. card. Ben. rut. dracunt.* (three or four of these) *ana* ℥j.
Aq. Theriac. Epidem. ana ℥ ß. oft ℥j. or ℥j. ß.
Some add *Diascord. fr.* vel *Theriac. Lond.* ʒj.
Spec. è chel. cancr. comp. ℈ij.
Syr. garyophyl. vel *è suc. citr.* ℥j.
m. f. Pot. vel. *Jul.*
Capiat cochl. 2. vel 3. altern. hor. vel cochl. 4. quarta quavis hora.

This prescription though it hath been in use almost an age, some sucking *Fermenters* have thought fit to make exception against the Treacle-water, because vinegar makes a great part of the composition, which

which they ſay, doth enrage the *fermentation*; though according to the judgement of others, Vinegar doth qualifie the *fermentation*, and coagulate the fermentative particles; moreover, it's adſtringent, ſhuts the pores of the body, and ſtops all evacuations, for which reaſons the uſe of Vinegar is very much ſuſpected by them; therefore inſtead of the *Aqua Theriacalis*, they allow to the preſcription double the meaſure of *Aqua Epidemica*, the deſcription whereof is made publick in a ſmall Treatiſe of the Colledge of *London*, Printed a good while ſince; but becauſe the Copies are moſt diſperſed, I ſhall think it no trouble to ſet down its deſcription here.

R. *Rad. torment. angel. pæon. m. zedoar. glycyr. helen.* ana ℥ß. *fol. ſalv. chelidon. maj. rut. ſummit. roriſmar. Abſynth. ror. ſol. arthemiſ. pimpinel. Dracunc. Scabioſ. Agrimon. Meliſ. Card. Beton. centaur. min. fol. & flor. calend.* ana *m. j. incidenda incidantur, contundenda contundantur, & digerantur per triduum in Vin. alb. opt.* lib. viij. *ac deſtil. in Alemb. vitr. Nonnulli præſcriptis adjiciunt ceraſa nigra, flor. paralyſ. papav. Rh. & quid non?*

In

In Childrens Fevors, *Aqua ſcordii compoſita* is preferred before *Aqua Theriacalis*, or *Aqua Epidemica*, becauſe it is leſs hot, and conſequently leſs hurtful. Let us halt a while here, to examine, whether the Vinegar being an ingredient in Treacle-water, doth ſuppreſs the *fermentation* of a Fevor in the veſſels. To thoſe that have but had the leaſt taſt of the Chymical art, it doth appear very plain, that fermentation doth ariſe from a ſtrife there is between the acid, and alcalized, or lixivious ſalin particles, which in properties are ſo contrary to each other, that through the deficiency or failing of either of them, the action of *fermentation* is immediately cut off; the ſame likewiſe happens, when either doth exceed the other in its juſt proportion of ſtrength, through which they fall on each other. It is held for a certain truth, that in a burning Fevor the blood is full of lixivious and alcalized ſalts, wherefore, by giving of a medicine, that is vitriolate, diluted with Vinegar, it doth neceſſarily happen, through natures ordinary way of working, that the *fermentation* (if any ſuch thing may be granted) is intended in its fury, through the vigor whereof the annoying corpuſcles are ſeparated from

from the maſs, and expelled thence, whereby at laſt it is perfectly depurated, and defecated. Moreover that we may lay the caſe whole open; if the concoction in the ſtomach be performed by *fermentation* (as it's every where declared by it's Aſſertors) take notice, that ſauces, whereinto Vinegar is poured, (eſpecially if impregnated with the infuſion of Capers, Broom-buds, or other raw ſour things) do ſet a very ſharp edge to it; for as ſoon as they are ingeſted, we are troubled with a glowing heat about the Stomach, and Hypochonders, alſo about the face, and top of the head. Secondly, Treacle-water being tempered with Vinegar, doth become thence more penetrating, and more vigorous in its vertue, whereby inſinuating readily into the moſt inward and central parts of the body, it performs the work of an antifebril medicine. Thirdly, Since this Treacle mixture is unadviſedly compoſed of many things, that are very hot and ſharp, as ſeveral ſpices, *Maſterwort*, and ſome impure Sulphurs, and others, Vinegar doth very much blunt the edge of them, and freeth thoſe Sulphurs, not only of their ſtink, but impure recrements. Whereby it's apparent, how great an error they are in, that under that pretence

tence of quieting the *fermentation*, rail againſt Treacle-water, and *Aqua Apotheriacalis*, becauſe of the acid ingredients. But ſetting aſide theſe diſcourſes, though I do not contemn Treacle-water for the reaſons newly quoted, yet for other cauſes I look upon it as a medicine of no effect and vertue; for the liquor that's diſtilled off, from the matter digeſted in the body of the Still, doth appear to be nothing, but a phlegm impregnated with a ſmall proportion of the vertues of the ingredients, and thoſe obtuſed too by acids. Secondly, Acids indued with the ſalin parts of the ingredients it hath attracted, being thence rendred more ponderous, do not paſs the helm or alembick, but remain in the bottom; ſo that the *Fermenters* need not to be ſtomacht ſo much at the hurt of theſe acids, ſince they are left behind at the bottom. Wherefore thoſe with whom this reaſon doth take place, make uſe of Vinegar impregnated only with the vertues of Alexipharms againſt peſtilent and malignant Fevors, ſetting aſide the deſtilling of it, they hold it to be ſtrongeſt by digeſtion and filtration, by means whereof the faculties of both are preſerved intire. Likewiſe thoſe that labour, to extract the volatil ſalts of Diaphoreticks,

phoreticks, and Alexipharmacals, by deſtillation, having ordered their infuſion in ſpirit of wine, they deſtil off the liquor, by all means avoiding the pouring any acids to it; hereof there is an example in the *Aqua Theriacalis* in the *Auguſtan* Diſpenſatory, and in that Treacle-water, which is aſcribed to *Paracelſus*, mentioned in the *mixtura è tribus in peracutis*. According to this way of reaſoning, it is inferred, that the *Aqua Scordii compoſita* deſcribed in the *London* Diſpenſatory, is much weakned in its vertue, becauſe the acid juices of Sorrel and Citrons, not mounting up to the Helm or Alembick, detain the vertues of the other ingredients within them; though notwithſtanding many railing at Treacle-water, becauſe of the Vinegar, make a great noiſe of the praiſes of *Aqua Scordii*, as being compoſed of Acids, that are not reſtringent. Theſe I would have to be anſwered, out of ſolution of the Problem, to wit, whether Vinegar, as it is added to Treacle-Water, be reſtringent; certainly not; for in time its reſtrictive faculty doth languiſh away, by being united with the alcalized and volatil ſalts of the reſt of the ingredients, until at length the nature of Vinegar being quite buried, the medicine groweth

groweth *ecphractick* or opening, in the ſame manner, as Oyl of Vitriol exceeding all others in reſtriction, and being obtuſed by the *Alcali* of Salt of Tartar, is now arrived to be a very great opener. Secondly, That aſtringents are very active (but it is *per accidens*) in removing the obſtructions of bodies, eſpecially of ſuch, as are inclined to Fevors, is made evident by this experiment, being confirmed by all mens judgements; Salt of Steel bred out of the ſtem of Oyl of Vitriol, is not at all different from vitriol it ſelf, ſince it is manifeſtly known, that the foreſaid ſalt is oyl of vitriol, coagulated through the hungry matter of Iron, and reduced to its old form and body of Vitriol, but advanced to a higher degree of purity; for Iron growing out of Vitriol, condenſed by being ſeparated from its mercurial part, now its late mercurial part, namely Oyl of Vitriol, being returned to it again, is as it were through a new birth reduced to its primitive body of Vitriol; but its impure recrements are rejected. So that hence, though the Salt of Steel is made viſibly to be a moſt ſpecial medicine for aſtriction, nevertheleſs it is prefer'd for a moſt potent medicine to remove the obſtructions of the

Spleen, Liver and Womb. This effect it very ſucceſsfully performs, by cauſing a combate and effervescency in the veſſels, between the acid and fiery ſalin parts of the humors, whereby the blood coagulated in the veins is at length diſſolved, and that which is thick, is attenuated. Steel prepared with Vinegar (whereby its vitriolate aſtringent vertue is increaſed) is eſteemed famous againſt obſtructions by all Phyſicians. Hence you may learn, that all chalybeate and purely vitriolate medicines are *per ſe* reſtringent and ſtopping, but *per accidens* they diſſolve and open; wherefore they ought to be uſed with a great deal of caution by Dogmatick-ſpagirical Phyſicians, according as it is illuſtrated in this following relation. A fermentitious Phyſician of no mean rank, having given *Crocus Martis* three times to one, that was troubled with a bilious *diarrhæa*, or looſeneſs, and though he had before preſcribed him two infuſions of *Rhubarb*, and *Mirobalans*, yet had occaſioned ſuch gripes in the Guts, pain, and inflammation of the bowels, that increaſing his ſtools as much more, ſent the Patient to *Limbo*. On what this unfortunate practice is grounded, you may judge from what hath been premiſed.

Now

Now it's time, to look back to the place, whence I digreſſed. The oppoſition of the Fevor is not only committed to an *antifebril* Cordial medicine, but another that's purely Cordial, is alſo joyned with it for aſſiſtance, thereby to relieve the Heart and Arteries, with a ſupplement of ſpirits; in the form as followeth.

R. *Aq. meliſ. tot. citr. lujul. aur. ceraſ. nigr.* ana ℥j.
Aq. mirabil. ℥ vj. *tinct. croc.* or according to others. *Spir. menth.* ℥ ij. *ſucc. kerm.* ℥ j. or ℥ j. ſ8. *Syr. garyophyl.* others write *Syr. è ſuc. citr.* ℥j.

m. f. Pot.
Capiat. cochl. 1. or 2. *altern. hor.*

Hereunto ſome add *Confect. Alcherm.* or *de Hyacinth.* ℥j. alſo, *ſpec. è chel. cancr. comp.* ℈ ij. or ℥ j.

But ſuch as do not ſo well approve of theſe kind of preſcriptions, becauſe thoſe diſtilled waters are ſo faint, and void of ſpirits, offer their Patients burnt Claret ſpiced, and mixt with cordial waters, and ſyrups. Alſo raw Rheniſh Wine, as appears by this following preſcript.

R. *Aq. Hord. depur.* lib. j.
Aq. bor. bugloſ. viol. ana ℥ ij.
Vin. Rhenan. elect. ℥ iij.
Syr. è ſuc. citr. Caryophyl. ana ℥ j. ſſ.
m. f. Julap.

E quo ſumat Patiens ℥ iij. *tertia quaque hora.*

This is a Julep of [redacted]his compoſing, as may eaſily be conjectured by the Wine it contains; for he doth not willingly leave it out of any thing, either for himſelf or for another; but I imagine he ought to be better verſed in that ingredient, ſince he hath for ſo many years made it his mothers milk, than not to know, what ſort of Rheniſh Wine ought to be put in, whether *Bachrach, Rinckhower, Hochmer*, beſides a hundred ſorts of Rheniſh Wines differing infinitely in ſtrength and quality from each other, but that's entruſted to his Apothecaries palate; but as for the ſucceſs hereof let that be buried with thoſe that have made uſe of it.

Cooling Cordials (according as they are called in the common phraſe) as the four Cordial-waters, *Aqua frigida Saxoniæ*, which

which by the former age none was thought like it, and others, are now almoſt quite grown out of uſe among the *Fermenters*.

The ſtrength of a Fevor being ſcarce abated with theſe helps, all hope is repoſed on *alexipharmacal ſpecies*, for ſince the violence of this heat hath granted no kind of truce, this ſix or eight days, from the ſtubborneſs and continuance of its force, it's now among the vulgar to be termed a malignant Fevor. Of theſe foreſaid *Alexipharmacal ſpecies*, or powders, there are examples extant of two forms, the one making mention of pretious ſtones, pearl, and Bezoar, the other being grounded on the baſe of *Alexicacal roots*, among whoſe number the root of *Virginian Serpentary* is in this age extoll'd above all others.

R. *Spec. è chel. cancr. comp. corn. cerv. n. pr.* or inſtead thereof, *rad. ſerpent. virg* ana ʒſ.
Lap. contrajerv. ℈ij.
m. f. Pulv.
Hereunto ſome are pleaſed to add,
Trochiſc. viper. ℈ij. or *ſalis viper.* ℈j.
Cochinil. ʒſ.
Capiat ℈j. *quarta vel ſexta quavis hora in Cochl.* 1. *Cordial Julap.*

Since *Lapis Contrajerva* is ſo famous among us, I ſhall here ſet down its deſcription.

R. *Rad. contrajerv. pulv.* ℥j. *ſerpent. virgin.* ʒij. ſ8.
Extract. rad. Angel. tormentil. ana ʒij. *Corn. Cerv. uſt. C. C. nov. pr. Coral. rubr. chel. cancror. lævig.* ana ʒj. ſ8. *Antimon. Diaphor.* ʒiij.
Croc. angl. Lap. Bez. ana ℈j.
Cum gelat. ſpol. ſerpent. formentur globuli, ſub umbra exſiccandi.

Some add, *Trochiſc. è viperis* ʒj.
Cochinil. ʒſ8. vel ʒj.
Ambr. grvſ. gr. 8. or 10.
Doſ. ℈j. *ad* ℈ij. *&* ʒj.

This form I have alſo oft met with.

R. *Spec. confect. liberant. vel Cardiac. magiſt. vel Diamargar. frig.* (one or two of theſe, or all of them) ana ℈j. *magiſt. perlar. coral.* ana ℈ſ8.
Lap. Bez. or. gr. 8.
m. f. Pulv.

Sometimes in this manner.

R. *Lap.* 5. *pretioſ.* ana gr. 15.
Margar. præp. ℈j.
Lap. Bez. ℈ſ8.
m. f. Pulv.
Doſ. gr. 15. *vel* ℈j.

Sumeada

Sumenda ter per diem horis mediis in cochl. 1. *Cordial. Julap.*

Others who abound in their own ſenſe, do wonderfully magnifie a certain Cordial Extract, *Extractum Cardiacum*, but not that of *Quercetan*; among theſe there is one formerly, who was a Captain of a Troop of Horſe, but of late years hath practiſed as a Doctor of Phyſick, he declares for a certain, that he can readily abate the impreſſion of the moſt furious malignant Fevors, and that by the ſole means of this ſame *extract*, aſcribing the ſecret of it to himſelf, whereas it's well known, it was compoſed by one Doctor *Read*, a famous Phyſician in his time. It is oft made uſe of by modern practicers, though with no better ſucceſs than attends ordinary Cordials.

The deſcription of the *Extractum Cardiacum* is this.

R. *Mithridat. Diaſcord.*
Philon. rom. Theriac. Andr.
Croc. Angl. Lign. Aloes, rad. Hyoſcyam. ana ʒvj.
Opii Theb. ʒiij. *extrahantur omnia ſeorſim cum ſpir. vin. q. s. & exhal. ut f. extr. Doſ. à* ℈ß. *ad* ʒj. *&* ʒß.

Patients having paſſed many nights without ſleep, and being grown light-headed, they judge it will be very beneficial, if they aſſiſt them with this ſubjoyned *hypnotick*, to be taken at the hour of reſt.

R. *Theriac. Londin.* (being leſs hurtful, becauſe of its moderate heat) *vel Conſerv. lujul.* ʒ ſs.
Margar. præp. ʒ ſs
Laudan. opiat. gr. 2, 3, vel 4.
m. f. Bol.
Capiat hora ſomni.

All this advice being followed to no purpoſe, and the fate of the ſick patient drawing near, Phyſicians fly to the ſo prodigiouſly cried up *ſpirit of hartshorn*, as it were to their ſacred anchor, giving hereof eight or twelve drops, twice or thrice a day, in a ſpoonful of cordial Julep; neither doth much time paſs, before Phœnigms and Epiſpaſtick Emplaſters, in teſtimony of the laſt unction, are applied to the inſide of the arm, a little above the wriſts, likewiſe on the inſide of the legs, a little above the ancle, and oft near the arm-pits, and now and then to the nape of the neck. The task they are deſigned to perform, is to drive

drive out the malignant and venemous matter, under the ſhape of an *ichor*, or ſharp water, into large bladders, from the deepeſt parts, to the outward skin, which being perforated, *Melilot* plaiſters are to be applied, to dry up the moiſture. At laſt they are to bid the Patient his laſt farewel, by tying live Pigeons, cut through the middle, to the ſoles of his feet, or pickled Herrings, or ſharp Leven, Spurge, Crowfoot root, wild Pellitory, Muſtard-ſeed, black Soap, or brown Salt, one of them, or all, beat together, and ſo the ſick man is left to the diſpoſition of the Stars, in which caſe ſome, though very few, after they have lain ſome hours ſpeechleſs and ſenſeleſs, under the ſhadow of death, they have been raiſed and awakened by degrees, nature exerting its drowſie ſtrength; others dye with Convulſions, or in a fainting fit.

Modern Practicers do not much matter, what drink their fevoriſh Patients are to quench their drought with, ſome bold Phyſicians allowing them ſtrong beer, others ſmall beer with a toſt in it, or the cold and rawneſs being taken away by warming of it. Some give their Patients thin water grewel to drink, others the decoction of the ſhavings of Hartſhorn, and ſometimes

times burnt, or both together. Some allow the decoction of French barly. Juleps tempered with acids, *ſal prunellæ*, and cooling ſyrrups, are among moſt grown out of uſe becauſe of the acids, which they ſuſpect for the cauſes newly alledged.

If you require of me what animadverſions I make on the premiſed practice, I ſhould not fruſtrate you expectation (though elſewhere, excuſing the ſlenderneſs of my judgement, I ſhall uſe my indeavors in it) were it not, that the *Belgick-German* practice (for there is ſcarce any difference between the *German* and *Dutch* Practitioners, excepting that the later are more liberal in bleeding, and the former do much uſe certain antifebril powders) and the *French* method could ſo conveniently be ſubjoyned here.

In the *Low-Countries* and in *Germany* a Phyſician having diſcovered a continual Fevor to ſurprize the Patient, immediately premiſing a purging Glyſter, made out of a pint of *Emollient Decoction*, one ounce or an ounce and half of *Electuary lenitive* or *Catholicon*, with common oyl, or oyl of Violets, Hony, and a little ſalt, adviſeth bleeding out of the right arm, to ſix, eight, or ten ounces, thereby to take off from the plethory.

ry, to lighten nature of its burden, open the pores that are ſhut, and remove the obſtructions of the bowles. Next day to cleanſe the foulneſs of blood, and to remove the heap of foul humours, that are accumulated in the lower region of the body, he compoſeth this following, in a moſt ſingle form of a potion.

R. *fol. ſen. or. m.* ʒij. ʒiij. *vel* ℥ſ8. *ſem. fœnic. d.* ʒſ8. *vel* ʒj.
f. infuſ. per noct. in aq. cichor. q. s.
In Colat. ℥iij. *vel* iv. *diſſolv. man. calab.* ℥j. *vel.* ʒj.ſ8. *vel.* ℥ij.
ſometimes *Syr. roſ. ſol.* ʒj.
m. f. Pot.
Capiat cras mane cum cuſtodia.

Others make uſe of the *Cold Infuſion*, as they call it, being made out of the ſaid leaves of *Sena*, in the ſame weight, with or without a corrective, infuſed all night in fountain water, without fire, dropping into it *ſalt* or *oyl* of *Tartar*, ten or fifteen drops, afterwards ſweetning the expreſſion with *Manna*, *ſyrup of Roſes laxative*, or Sugar.

Rhubarb is ſet aſide, becauſe of the heat, that abounds in it, and its binding faculty, after

after it hath done working. Although after this manner they give purges in the beginning of continual Fevors, yet they do not contemn *Hippocrates* his precept; πέπονα φαρμακεύειν καὶ κινέειν ἢν μὴ ὀξυχολῇ, &c. that is, humors that are concocted, ought to be purged and ſtirred, not crude ones, unleſs they ſwell and run up and down, becauſe they expel only ſuch excrementitious humors, that lye lurking without the veſſels in hidden places of the meſentery, and guts, which certainly would never be concocted; for, feeding much on roots, cabbage, ſalletting, milky diets, butter-milk, and other things, that contain a great deal of excrementitious juice, their bodies do abound with thoſe kind of humours. Wherefore the foreſaid law of our great Phyſician doth only relate to humors, floating within the veſſels.

Afterwards they order a *Laxative* glyſter to be given every other day, for to ſuppreſs thoſe violent flames of the Fevor, and frame *Juleps* out of cooling waters and ſyrups, and ſometimes *Emulſions* out of Almonds and cooling ſeeds.

The impaired vital faculty they relieve with a *ſpirituous* potion, after this form, according as their preſcriptions here and there

there in the *Dutch* Apothecaries ſhops do plainly inform us.

R. *Aq. 4. cordial.* ana ℥j.
Aq. cinam. ℥ſſ. *vel* ʒvj.
Confect. Alkerm. ʒj.
Spec. Diamarg. frig. ℈ij.
Syr. è ſuc. citr. vel granator. ℥j.
m. f. Pot.

Ofttimes to theſe cordial waters the ſame quantity of *Aqua Meliſſæ* is added. Sometimes inſtead of *Aqua Cinamomi* they put in *Aqua vitæ Mathioli*; alſo *Confectio de Hyacintho* inſtead of *Confectio Alkermes.* Nature moving towards the extremity, they fly uſually to this cordial powder.

R. *Spec. Diamarg. frig.* ℈ſſ.
Magiſt. Perlar.
Coral. ana gr. v.
Lap. Bez. or. gr. iij. vel iv.
m. f. Pulv.
ſumendus bis per diem mane
& ſero in Julap. Cord. modico.

The animal faculty being much broken through want of reſt, they cauſe ſleep by this following potion.

R. *Aq.*

R. *Aq. Bor. nymph. pap. Rh.* ana ℥j.
Aq. Cinam. ℥ij. *Confect. de Hyacinth.* ℈j.
Syr. Papav. Rh. ℥j. *vel* ℥j. ſ8.
m. f. Pot.
Capiat hora ſomni.

They very ſeldom make uſe of Opiats in this caſe, being much diſſatisfied in their unſubdued narcotick force, eſpecially where the ſtrength of the Patient is ſcarce proportioned to diſſipate it.

The ſick body being ſurpriſed with a phrenſie, they draw blood out of the foot, or if his principal faculties are two languiſhing, they revel the blood by cupping-glaſſes, from the brain to the extream parts. The Fevor declining, and diſcovering a white ſediment in the Urin, they cauſe an evacuation by purge once or twice.

The *French* ſubdue putrid and malignant Fevors, by bleeding the firſt time largely, and afterwards repeat it every other day, to five or ſix ounces; the days that are between, they preſcribe a *laxative* glyſter, and ſometimes a potion of the infuſion of *Sena*, *Manna*, and *Caſſia* (which later is in great veneration among them, *La bonne Caſſe* as they call it) *ſyrup of Roſes laxative*,

tive, and *Cryſtal mineral.* For the critical days they take no notice of them, often ſaying, that to expect the *Criſis*, is to expect death, and ſo by drawing of blood, and purging with glyſters, they go on very diligently. For their ordinary drink they allow *ptiſan*, which is to be ſold ready made in the ſhops all *France* over.

The *Germans* do not differ from the *Dutch*, except that having emptied the body, by purging and bleeding, they propoſe powders, to expel the febril miaſms, and to cool, compoſed out of *Terra ſigil. Bol. Armen. corn. cerv. uſt. raſ. ebor. rad. tormentil. biſtort.* and the like, but before all theſe they prefer *Pulvis Rubeus Pannonicus*, ſet down in the *Auguſtan Pharmacopœa.*

CHAP.

CHAP. V.

Shewing that the modern practice of ſubduing continual putrid Fevors, is barbarous, and killing.

THat the practice of *Fermentators* is to be abominated, and that it is killing, who can deny? Since among a great company of fevoriſh Patients, the greater part whereof are probably ſtrong, young, well fleſht-men, not being ſwelled or retcht in their Hypochonders or Belly, yet ſcarce the third man recovers his former ſtate of health. What muſt be inferred from hence, when in the rage of a Fevor, though the Phyſician be ſent for at the firſt minute of the Diſeaſe, and that the ſtrength of nature is more than proportioned to ſubdue the Fevor, nevertheleſs the poor wretch dieth? yes, let all things be adminiſtred according to the moſt received rules of Phyſick, let the higheſt cordial be given, alſo *Extractum Cardiacum*, *Pearl*, *Bezoar* and the *ſpirits of Hartſhorn* it ſelf, yet very oft to no purpoſe, and the Fevors will triumph until the hour of death? But if

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in favour of the *Fermentators* it be instanced, that before our *Æsculapius* came to the assistance of the sick man, the flame was kindled to the top, and that the *Fevor* had taken deep rooting, that the malignity of the disease had trodden down the principal or commanding faculties, the cause of the fatal day is not to be imputed to the Physitian, nor to his remedies, but to the malignant distemper, too much inraged by too long a stay. Hereunto I reply, notwithstanding that the Physitian was at hand, at the very glimpse of the first spark of the Fevor (which possibly then was of no such ill aspect) as I hinted just now, nevertheless the case will run to ruine. But on the other hand, if any one that liveth in the Country, be he a Country man, or come from the City, be taken with a Fevor, and the care be committed to an old wife, immediately shegives him a certain posset, that is througly savoured with Carduus or Pepper, and puts him to bed, covering him well with clothes until he fall into a dew sweat; this being once or twice repeated, she commits the rest to nature, wherein she proves so lucky, that out of ten nine, if not all, for the most part get the better of their distemper. Moreover the Divine old man scarce ever gave greater relief to any in a

Fevor, than by doing nothing, and committing the whole buſineſs to nature, and therefore he oft urgeth that nature be not interrupted in *concoction*. *Aphor.* 22. *lib.* 1. μὴ ὠμὰ κινέων, *&c.* that is, do not move crude humours, and *Aphor.* 24. of the ſame book. It were better, if they cannot diſcover the adequate remedy, to follow *Avicens* document, *ſen.* 4. *lib.* 1. *cap.* 1. *Cum ignoraveris ægritudinem, relinque eam naturæ, quia aut curabit eam, aut manifeſtabit eam*, that is, when you do not know the diſeaſe, leave it to nature, becauſe either ſhe will cure it, or diſcover it. Alſo they would contribute far greater advantage to the eaſe of the ſick, by expecting with *Hippocrates* the *criſis*, than by a thouſand tricks to circumvent nature; for if they can do no good, let them do no harm at leaſt. But now it is, I am at leiſure, particularly to ſet down the order of this lazy practice. Thoſe that reject glyſters in the beginning of a Fevor, becauſe they ſhould not blunt the edge of the ferment too much, do not at all perform their duty in the right adminiſtring of things, ſince the rubbiſh of the body that is lodged about the turnings and windings of the guts, and the hidden places of the meſentery, not being

ng expelled, doth either by profusing steems nto the vessels, very remarkably increase he heat, or by putrid particles creeping in- o the blood, is apt to kindle the Fevor. This rubbish because it is incapable of be- ng concocted, and is lodged without the essels, does easily yield to a gentle laxative otion, or purging glyster, without any ear of increasing the heat. But since peo- le here are such immoderate devourers of lesh, that the belly being the sink of the hole body, must needs abound with sor- id excrements, is not a laxative purge, or Cathartick glyster very necessary? But it ust be given in the first preceding days, or afterwards the greatest part of that filth nd dirt is carried away into the vessels, by he rapid torrent of the blood, and there- ore all purging is to be set aside; for hereby nature would else be drawn from s work, with a great disturbance, and hat without the least benefit. Neither is hat I have proposed just now contrary to *Hippocrates*, as you may observe, *Aphor.* 10. *b.* 4. *In acutis passionibus eadem die si fi- ri potest, medicandum, nam in his cun- tari malum est*, that is, in all acute passi- ns you must give physick the same day, if ossible; for to tarry is hurtful: also

Aphor. 29. *lib.* 2. and in *Aphor.* 30. *lib.* 1. he gives the reaſon for it. *Circa initia omnia debiliora, & in ſtatu omnia fortiora, quæ purgationem fieri impediunt*, that is, about the beginning all things are at weakeſt, and about the ſtate at the ſtrongeſt, which hinder, that a purge ſhould be given. Secondly, all bodies that are inclinable to Fevors, or are fevoriſh, are for the moſt part in the beginning oppreſſed with a *Plethora ad vires*, or a fulneſs of the veſſels, more than their ſtrength can bear, whereby the ſpirits are pincht, and through too great a condenſation grow vehemently hot, the circulation grows ſlug and dull, and is carried in a diſorderly motion, and the pores are ſtopt; how urgent is the caſe then, that ſome blood be taken away immediately? thence the ſpirits will be able to beſtir themſelves, the motion of the blood from irregular will become regular, the paſſages of the skin will be more free, and the heat will be moderated. But ſince it is not ſeldom, that a Fevor being ſubdued by the firſt bleeding, though not to an abſolute extinction of the fiery heat, the ſparks raiſing the flame again, the blood doth ſwell up a new, and run violently up and down, reaſon doth like-

wiſe

wiſe adviſe, that the veins are to be depleniſht the ſecond time, that we may arrive to the ſame effects. But thoſe that indeavour to venture the opening of a vein the third time, do unpuniſht make a playgame of a mans blood; for there is not ſo great a benefit reaped this third bleeding, as there was by the two former, as I have found by a thouſand trials, but the ſpirits and forces of the ſick are barbarouſly deſtroyed, by taking away their due food and nouriſhment, and quite ruining their baſe and foundation; for they inhere in the blood, as their foundation, and ſubject, and from it they draw life. Moreover, neither is the blood then ſo turgid and impetuous, becauſe beſides the former ſubſtraction of blood, the parts of the whole maſs are attenuated, melted and diſperſed through a great many little caverns and holes, that before were filled. Likewiſe there is now a cloſe engagement between the vital ſpirits and the febril corpuſcles (what theſe are ſhall be told you hereafter) ſo that if either you diſturb the ſpirits, or exhauſt and leſſen them by bleeding, the fevoriſh miaſms muſt neceſſarily get the victory, and produce death for their trophy. Thouſands are killed by the

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ſlaughter of the lancet. That you may underſtand the caſe more plainly, I will illuſtrate it to you by an example of one, that lieth ſick of a malignant Fevor, whom ſhould you bleed but a ſecond time, or ſometimes but once, you would certainly bring his life into danger, for neither Pulſe or Urin do ſignifie any great heat, that ſhould be the cauſe of the ſwelling of the blood, neither are the pores ſtopt by an abundance of ſoot; wherefore there muſt by no means any blood be taken away, becauſe it doth in no kind of manner, nor through its abundance, annoy the ſpirits; If however againſt reaſon blood ſhould be extracted, the ſpirits will be ſo much waſted, that they will be rendred too weak for the encounter. Secondly, ſince the veſſels by opening of a vein, are ſo ſwiftly depleniſht, the malignant matter, that ſtagnates in the capillar veſſels, or elſewhere, lieth hidden in remote holes and ſecret places, is thereby moſt impetuouſly drawn into the great veſſels, that lead to the principal parts, where joyning with particles of their own nature, do with a joint force fall upon the ſtrong holds of life: certainly this is a moſt clear demonſtration. We muſt here unty the knots of

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two particulars, that were asserted above. The first is the manner of computing the bleedings, whence the first is to be counted, whence the second and third. The other is, why there are but justly two bleedings set down. At the first assault of symptoms, that are derived from the spring of a Fevor, that is not intermittent (as *Hippocrates* here and there calls it, by which name are meant both continual and continent Fevors) the same day there ought some blood be taken away out of the right arm, to quiet and suppress the febril matter, that it may not be mixt with the mass, flowing through the great vessels, nor fiercely fall upon the spirits; for as much as this should happen, so much the quantity of the blood, that is to be extracted, ought to be moderated. Moreover, the measure of blood that is to be drawn away, is to be taken from the degree of the swelling of the blood; for if the degree of *intumescence* or swelling be at the degree of eight, and if unto this degree doth answer the taking away of ten ounces of blood, then if the *intumescence* be at the degree of four, the substraction of five or six ounces will be proportionable to allay it; and according to this manner you must

make your computation in the others. But where the *Orgaſmus*, or turgid working of the febril matter is appeaſed, and its malignant faculty ſuppreſſed, you may ſafely next day or two days after, by a cathartick potion expel the matter of a Fevor, that is impriſoned in hidden places without the veſſels, and in the capillar veſſels. In the ſame manner is a malignant Fevor to be dealt withal at the firſt aſſault, though otherwiſe it would certainly tend to the deſtruction of life, yet by ſo managing your affairs, the ſick man will be releaſed. There ought a laxative or at leaſt an emollient glyſter to be adminiſtred before the bleeding. Fevoriſh patients are oft in the beginning tortured with a violent ſhaking, extream vomiting, and frequent fainting, in this caſe ſix or eight ounces of blood being extracted out of the veins the ſame day, the ſwelling of the blood, the plethory of the veſſels, and the violent working of the febril matter have been quite ſuppreſſed. But poſſibly one may reply, that if the blood ſhould be preyed upon, on every appearance of the foreſaid accidents, it would be oft lookt upon as a very careleſs and needleſs piece of work, when ofttimes thoſe ſymptoms do of their own accord (the blood

blood being appeaſed) vaniſh away in ſix or eight hours, as uſeth to happen in intermittent Tertians, and ſome other kind of Fevors. I anſwer, that in ſuch a caſe, the overweight of blood is never lightned without great benefit, by opening of a vein, ſince the forementioned ſymptoms do iſſue from a plethory, and a hot burning matter; and granting that the violent working doth ſettle of its own accord, it will return again upon the leaſt occaſion; wherefore to relieve nature, there muſt neceſſarily ſome part of the burden be taken off. Secondly, the nature of an *Orgaſmus*, or violent working is well known almoſt to every experienced Phyſitian, whether it appears to be ſuperficial and moveable, or permanent; and thence may eaſily conclude about the neceſſity of bleeding.

But ſince it often happens, that ſick people do not adviſe with a Phyſitian before the ſecond, third, and fourth day, or afterwards, there firſt ought to be inquired, whether the ſame, or a greater, or a leſſer quantity of blood ſhould be extracted, than if a Phyſitian had had the occaſion, at the firſt aſſault, to have given his advice. Secondly, whether nevertheleſs a Phyſitian coming the third or fourth day,

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that ſubſtraction of blood ought to be accounted the firſt, and whether the fifth, ſixth, or eight morning after, the opening of a vein ought to be repeated: Firſt there muſt be conſidered the degree of concoction; and the ebb of the blood, occaſioned by faſting or thinneſs of diet, muſt be taken notice of, before any thing can be certainly concluded on. Wherefore take it only for a ſuppoſition, if hereafter you are not convinced of the abſolute truth thereof, that nature is imployed thirteen dayes, and ſometimes fifteen days, in concocting the matter of acute Fevors, and afterwards doth endeavour to ſeparate and expel it the fourteenth or ſixteenth day, according to the courſe of the Moon, wherefore (*Hippocrates*. pronouncing, *Aphor.* 13. *l.* 2. Ὀκοίοισι κείσις γίνεται, τυτθύνεται ἡ νὺξ δύσφορος, ἢ τῇ ἔμπροσθεν παροξυσμῷ, that is, thoſe whoſe *criſis* is growing on, the night before the fit is very troubleſom to them) the concoction is brought to the height or ἀκμὴ on the thirteenth, becauſe that is accounted the day, that immediately preceeds the fourteenth, on which according to the dictate of the ſame *Hippocrates* (*Aphor.* 22. *lib.* 2. Τὰ ὀξέα τῶν νουσημάτων κρίνεται ἐν τεσσαρσὶ καὶ δέκα ἡμέρῃσι, that is, acute Fevors come to a *criſis* in

in fourteen days) the *criſis* of acute Fevors are wont to happen. Now ſince the night before the *criſis* all things are very troubleſom, it muſt be, that nature is at that time moſt buſied, and is at the higheſt point of concoction, which namely is the thirteenth day or night, immediately preceeding the fourteenth day, being the day of the *criſis*, on which, namely the fourteenth day as I hinted now, nature doth gradually ſeparate, and expel the concocted febril matter, by ſtool, vomit, through the pores of the skin, or hemorrhage, but moſt frequently by urine, in the ſhape of a white and heavy ſediment, if the concoction be perfect, or reddiſh if imperfect. Here is to be noted, that *criſes* which happen to bodies in hot and thin climates, and whoſe blood floating in the veſſels, is very thin, and the veins free from obſtructions, are very rapid, and ſwift, expelling the concocted matter by ſtool, or through the pores of the skin, all at once as it were, and with a violence: but thoſe that lie ſick in a northern climate, becauſe their blood being thick, muddy and ropy, doth in all parts promote obſtructions, and their skin is hard and thick, and the faculty of their guts is dull; for the moſt part they

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are freed by having the febril matter gradually ſent down to the Kidneys and Bladder. In the mean time it's not to be denied, but that the word *Criſis* by its firſt impoſition doth denote a ſudden change with diſturbance, either to life or death; wherefore though I ſaid above, that the matter was by a *criſis* gradually expelled, it is to be underſtood, in reſpect of a more rapid *criſis* that's proper to hotter countries; and in reſpect of the lingring ſolution of the diſeaſe, by tranſlation of the matter, it doth juſtly merit the name of a *Criſis*; for the whole matter is expelled in four or five days, more or leſs. This by the way. If then the thirteenth day be the top of the concoction, and that the ſymptoms are gradually intended from the minute of the *augment* or increaſe, which uſually happens to be in true acute Fevors, about the fifth, or ſeventh day, according to the variation of the Moon, it will not be ſafe to open a vein paſt the ſeventh day, becauſe then the ſpirits are endeavouring to concoct, and the ſwelling of the blood is ſuppreſſed by faſting (if bleeding was not premiſed) and thinneſs of diet; what is it then you will exhauſt the veins for? If notwithſtanding in the beginning of an acute Fevor, (which is defined

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to be the first four or six days, because during that time the first appearance of symptoms is scarce altered) the fevorish Patient hath beyond reason and necessity gratified his stomach and appetite, and that thence the turgency of the blood hath been fed, it may be convenient to take away some blood, though it be the eight day; so that those things are to be defined, according to the swelling of the blood, and the decrease thereof by a thin diet; for if so much be consumed by a thin diet in the beginning, or the first four or six days, as is proportionable to once bleeding, it will be advantageous to bleed once besides within the seventh day, but those things are to be left to the judgement of every experienced Physitian: yet let him not be unmindful, that bleeding and purging are by *Galen* stated great remedies, on the use whereof life and death doth depend; neither is the former to be less suspected than the latter, wherefore that *Aphorism 29. lib. 2.* that was so prudently dictated, doth relate to both, *viz.* ἀρχομένων τῶν νόσων, ἢν τι δοκῇ κινεῖν κινεῖν; that is, move at the beginning of diseases, if any thing ought to be moved. Diseases are said to begin, as long as the symptoms of the first assault continue

nue without alteration, but as ſoon as they are ſenſibly intended (provided there doth not follow a remiſſion preſently after) then they exceed the limits of the beginning and arrive to the *Augment* or increaſe of the Diſeaſe. Thence doth *Galen* alſo admoniſh us on the foreſaid *Aphoriſm* 29. *l.* 2. *Ut citius eveniant coctiones, circa principia melius eſt evacuare per venæ ſectionem & purgationem*, that is, that the concoctions may ſooner be performed, it is beſt to evacuate by bleeding and purging at the beginning. *Avicen* doth oft highly extol bleeding, but at the beginning of a Fevor, *ſen.* 1. *lib.* 4. *tract.* 1. *Cap.* 33. writing concerning the cure of a Fevor. *Cum cauſa eſt multitudo humorum atque repletio, tum oportet & in principio properes ad phlebotomiam*, that is, when the cauſe is the abundance of humours, and repletion, then you ought to apply your ſelf to bleeding and that in the beginning. Likewiſe in another place he ſaith, *Evacuatio non eſt aliqua niſi ſicut phlebotomia in quacunque hora accidat, & non expectatur criſis neque digeſtio*, that is, There is no evacuation like bleeding, at whatever hour it happens, and that there be no expectation of a *criſis* or of digeſtion. *Galen lib. introduct. cap.* 3. diſcourſing of Fe-

Fevors expreſſeth himſelf in this manner: *Curatur in principio venæ ſectione, in ſtatu tam frigidæ, tam aliorum quæ refrigerandi vim obtinent potio confert; idem enim ſemper remedium accipitur, ut quocunque morbi initio ſanguinis detractio*; in Engliſh thus, it is cured in the beginning by bleeding, at the ſtate by drinking of cold water, and other things that have a power of cooling; the ſame remedy is always made uſe of, as alſo is bleeding at the beginning of the diſeaſe; and in another place he declares; *Quod in conſilii inopiam deveniunt, qui ſtatim à principio non vacuarunt ſanguinem*, that thoſe want advice, who immediately at the beginning have not taken away ſome blood. *Alexander Trall. lib.* 12. *c.* 2. adviſeth thus, *Continentes Febres ſolerte diligentia curari debent, ſubitoque id faciendum, quod internotitia dictaverit, ſive miſſionem ſanguinis, ſive expurgationem requirat: maximum enim incommodum eſt tum omnibus morbis, tum in continentibus dilatio*, which is thus engliſhed, Continent Fevors are to be cured with a prudent diligence, and that muſt be ſuddenly done, which your knowledge doth dictate, whether it require bleeding or purging: for delay is the greateſt diſadvantage

tage to all diſeaſes, and to Fevors. What need is there of words? we have abundantly made the caſe known by reaſons, authorities, and experiments, whence it's evident, how barbarouſly they act to the ruine of thoſe ſick people, that are troubled with a continual putrid, and malignant Fevor, by taking blood away from them about the middle and end of the Augment and State. It is a great truth I ſhall ſay, that at the beginning it is life, in the middle and end of the Augment and State it is death.

Againſt what hath been ſaid an argument might be here taken from what the great maſter of Phyſick doth command, *Aphor. 8. lib. 1. viz. Quando morbus conſtiterit in ſuo vigore, tunc victu tenuiſſimo utendum*; that is, when the diſeaſe is in its vigour, then you are to uſe a very thin diet; that the maſs of blood may not increaſe ſo much as to exceed the power of natures government; wherefore for the ſame reaſon one may take away blood in the vigor, that it may not too much oppreſs and burden the ſpirits. The objection is eaſily refuted; a very thin diet is commended, that the ſpirits may not be drawn from the concoction whilſt they are buſied in ſubduing the Febril matter; but not becauſe of the too

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great increaſe of blood, ſince the mouths of the veſſels lye almoſt flat, and there is rather a greater proportion of it required, to ſupply thence a greater quantity of ſpirits.

It is not difficult, to extract from the premiſes a reaſon for two bleedings in continual Fevors, ſince it's to be celebrated in the commencement of the Diſeaſe, or the beginning of the augment, though very ſeldom; for if it be performed as oft as poſſible at the time of the beginning, namely in the ſpace of four or ſix dayes, you ought not to open a vein beyond the ſecond time; for there ought to be at leaſt two days between each bleeding, to recover ſtrength; whence it's apparent there is ſcarce occaſion left for a third, unleſs thereby you intend to annoy nature in the augment, and to cut off from her ſtrength. But if a Fevor be attended with malignity, bleeding ought not to be attempted or repeated without a great deal of caution.

What ought to be done in the beginning of a Fevor hath been hitherto diſcuſſed. At preſent, we muſt take into conſideration the cure of the augment or increaſe of a Fevor. Firſt of all we muſt be reſolved, whether at the time of the growing

of the Fevor the fermentation is to be promoted. Physitians here are blinded in a mist, being utterly ignorant of the stages of Fevors, they follow a heedless and impious practice, daily tainting their hands with the death of their Patients; what compass do they steer by, to arrive at the exact minute of opening a vein, or giving a purge? what mark do they aim at, when they force pouders and cordials on their Patients? and if there should a faculty of suppressing continual putrid and malignant Fevors be allowed them, being ignorant of the manner and punctual time of giving them, they are capable of doing as much mischief with them, as a mad Barber with a Razor.

Hippocrates being perswaded by this reason, (which is to be rightly noted) doth take the beginning of his Aphorisms from an observation to be minded above all others in the art of Physick. Ὁ βίος βραχὺς, ἡ δὲ τέχνη μακρὴ, ὁ δὲ καιρὸς ὀξὺς, ἡ δὲ πεῖρα σφαλερὴ, ἡ δὲ κρίσις χαλεπή, that is, life is short, art is long, time is swift, experimenting is dangerous, &c.

It is the third member of this precept, that expresses what is to our purpose, *viz. Time is swift*, that is, the exact opportuni-

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ty and occaſion is of great moment; eſpecially in acute diſeaſes; for the ſame medicine in reſpect of time doth both kill and cure. That a Fevor doth make as it were four ſtages, vulgar obſervation tells us. It paſſeth the firſt whilſt the fevoriſh matter lieth hidden about the ſubſervient entrails, the Stomach, *Pancreas*, Lungs, the Gall-Bladder, Glandules of the Meſentery, one or all of them, thence vomiting up into the blood certain tumultuous miaſms, that force it into a heat. As ſoon as the foreſaid matter is thronged out of its lurking places, and forcibly ruſhed into the great veſſels, the ſymptoms thereupon raging in heat do forthwith ſhew a countenance of the augment or increaſe. And when the whole mine of febril matter is quite floated into the channel of blood, then the ἀκμὴ or vigour is near at hand. At that time, there is a cloſe ingagement with the febril enemy, and its force being broke, Nature by her victorious arms doth expel thoſe rebellious inteſtine corpuſcles and ſeparated humours into ſeveral ſinks of the body; the diſeaſe in this manner declining, the ſick man doth arrive ſafe and well. This expedition doth contain ſome particulars very worthy of note. 1. At the firſt of

the ingagement, nature doth encounter with the Fever at a distance, some steems being only scattered abroad before, the gross of the preternatural matter lodging in the deep places without the vessels, nor at all mixt with the torrent of blood. 2. The Fevor increasing, the lesser part of the matter is confused with the blood that flows by, but the greater part doth as yet remain still and quiet in the spring. 3. At the vigour, all preternatural bodies are closely intermixt and confused with the natural. From hence doth shine a light, whereby the bottom of the difficulty wound up in the foregoing discourse may be plainly known and discovered. Wherefore since fermentation doth tend to the same end concoction doth, namely of subduing the heterogeneous quality of the adventitious minims that are got into the blood; and that whilst the disease is yet in the augment, only part of the Febril matter is crept into the blood, and not throughly insinuated into the depth of the forementioned scarlet juice: it will prove a help no ways deceitful, if the sick man doth take a *Diaphoretick* draught, well impregnated with volatil salts, whereby he may be put into a smart sweat; certainly a very proper means,

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through which the vital power may free it ſelf from thoſe hurtful corpuſcles; ſince as yet the ſpirits are numerous and vigorous, and are not ſo much ingaged by the inteſtine enemy; whence conſequently they have ſtill a power of expelling; the fumes and ſoot have not yet filled up the paſſages of the body, nor pores of the skin, being left open for natures cutaneous evaporation; a part only of the Febril matter is here and there looſly intermixt with the blood, and may eaſily be forced out thence. From all which it doth plainly appear, and is inferred that fermentation (fie upon the abuſe of the word) is in this caſe to be rendred eaſie; the liquor of the veins being thereby attenuated, occaſion is given to the ſpirits to fly together to make an united force to grind off the ſting of the Febril matter, and thereupon to expel it. But though the fermentation is to be rendred eaſie, it is by no means to be increaſed and intended, for that would put the Bitumen of the blood into too high a flame, and through the crackling and vibration of the ſalts would occaſion a very dangerous ſtorm in the blood. Of this nature are almoſt all the remedies that are propoſed by the *Fermenters*; namely *Aqua Epidemica*, Spirits

of Hartſhorn, and all the other fiery cordials, as ſhall hereafter be reſolved more at large. Neither do I eſteem thoſe reaſons I have now produced ſo much, but that the many experiences whereby I have delivered ſome hundreds after the manner aforeſaid of their continual Fevors without ſuffering them to come to the height, do more clearly diſcover the matter.

According to the mark ſpoken of before let us enquire, what harbour this Rhomb of giving hot cordials by ſpoonfuls will bring them to; undoubtedly if the Fevor be any thing outragious, there is danger of ſhipwrack. For things that are taken by ſpoonfuls contribute matter to the inflammation and fire, increaſe the matter of the ſoot, and really ſtop the pores; moreover, do not concoct the leaſt part of the febril matter, neither do they ſeparate or expel it being concocted. Wherefore if a Fevor is of its own accord carried on to the height without doing any thing, and the febril matter be more cloſely and intimately knitted with the blood and ſpirits, and the whole mine be diſturbed, and profuſed into the great veſſels, certainly in doing ill, they muſt ſpeed much worſe. What they have acted in the increment, hath juſt now

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been ſhewed; at preſent pray give your judgement; are your toothleſs wifes in the country more dextrous in curing a Fevor, or *Fermentitious* Phyſitians? Neither are the ſick themſelves ſo void of ſenſe, but that they are ſenſible, they are precipitated by the burning cordials of Fermentators in the ſtate of their diſeaſe into their too early Tombs. The forementioned Cordials derive their burning nature from an impure *Sulphur*, which doth not only plentifully abound in the ſpirits of wine, the *menſtruum* of all thoſe compounded alexipharmacal liquors, but the ingredients themſelves, eſpecially the aromaticks contain excrementitious *Sulphurs* and impure ſalts; whence it happens, that thoſe that have liberally taken of them, arrive ſooner to the end of their fatal journey. Wherefore it's plain enough, that by theſe things the fermentation is intended, the maſs of blood is forced into a fiercer fire and burning, and the whole ſink of the Febril matter, which only partly flows to the blood, and partly remains in its hidden ſtation, is violently ſuckt up, and drawn in by the circulating juices, and is united with them in every particle; ſo that to give the prefaced cordials, which increaſe the fermentation,

and do not at all render it easie, by a most subtil and diaphoretick vertue, is with purpose to kindle the body into a flame, and rob the sick of his life. However that inquiry may not be pretermitted, what admirable effects do issue from the fore instanced *Aqua Epidemica*, we are to be resolved from the examination of the context of the simples. *Tormentil* Root is in the front, whose power doth reside in a ponderous fixt salt, and for that reason no part of it doth ascend the Alembick. *Liquorish* in this place is termed alexipharmacal; which was never attributed to it by any Physitian, nevertheless it was possibly added, to abate the acrimony of the other ingredients: but since it doth also obtuse the attractive vertue of the *Menstruum*, and render it incapable of attracting the salts of the simples, neither doth the least particle of it climb out of the body to the head of the Still; certainly it ought justly to be rejected hence. Moreover, who but a mad man would commend *Mugwort*, *Agrimony*, *Betony*, and other such like herbs, against the Plague, according as they are inserted by the former age in this composed medicine? These though they use some small force against the venom of the air, yet other

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Alexipharmacals, as long as they are far more deſervedly commended, for oppugning this Epidemick venom with all their force, ought to be preferred.

What concerns Spirits of *Hartſhorn*, you would ſtand in a doubt, whether they be more prevalent in their pernicious qualities, or in their ungrateful taſt. This latter is taken notice of by all, that have had the occaſion of taſting them; the former is very amply aſſerted from the complaints of thoſe that have uſed them; for they are no ſooner paſt the throat, but have cauſed a furious burning in the ſtomach and entrails, raiſed the fermentation to the higheſt pitch, put the whole ſtructure into a fire, and deſtroyed the ſpirits and ſtrength of nature. All theſe evils do proceed from an impure and venomous *ſulphur*, that is latent in the ſpirits of *Hartshorn*, and corroding fiery volatil ſalt, that is united with the foreſaid *ſulphur*. Notwithſtanding though the aforeſaid ſpirits are ſo virulent and deleterious, they are not quite to be rejected, for experience and authority do witneſs, that the moſt mortal venoms, namely, *Antimony*, *Quickſilver*, *Arſenick*, &c. do contain within their bowels an alexipharmacal vertue, which is very power-

powerful in expelling of venom, and other ſubtil malignities. Wherefore if the ſpirits of *Hartſhorn* by a particular preparation are purged of that virulent *ſulphur*, and the force of its corroſive ſalts extinguiſht, there will be remaining only a pure cordial *ſulphur*, and a moſt ſubtil volatil ſalt, which by their cloſe union and coaleſcence do not only contribute ſtrength to the vital ſpirits, but with an united force firſt extinguiſh the malignant miaſms, and afterwards expel them. Theſe ſpirits do not burn and inflame, like others, but conſiſt of a pure ethereal and moſt penetrating body, and are famed not for intending the fermentation, but rendring it apt and eaſie, whereon the efficacy of the cure doth chiefly depend.

The fame of *Lapis Contrajerva* againſt putrid and malignant Fevors is ſpread among moſt people, but how deſervedly, let thoſe judge, that have made trial of it. The *Contrajerva* roots, which are the baſe of the compoſition, beſides dregs and a mealy thickneſs, contain neither volatil, not fixt ſalt, that is effectual, nor any quality, that may be diſcovered by ſcent or taſt; but on the other hand, it is inferred from many experiments, though the root hath

hath been given in a double doſe to thoſe, that lay ſick in fevors, that it ſcarce did a pins worth of good. The *Virginian root* doth potently heat and kindle the *Bitumen* of the humours; ſo that it doth not effect ſo much good by its diaphoretick vertue, as it doth harm by its cauſtick quality. *Cochenil* grains do recreate the ſight by its colour, but not at all the vital ſpirits by its cordial vertue. Prieſts do ſwear on the words of the Goſpel, but ſome Phyſitians ſwear more religiouſly on the ſtupendious vertues of *Extractum Cardiacum*, deſcribed above. But whence ſuch great vertues ſhould proceed, may be lawfully inquired into. Certainly, in all extracts the moſt active particles do together with the *Menſtruum*, that is evaporated, fly away into the air, a groſs dreg that is without any ſoul in it, remaining in the bottom, and conſtituting the body of the extract; pray tell me, are there not wonderful faculties, for ſuppreſſing malignant Fevors, hidden in the bowels of ſuch a kind of Extract? Moreover ſince *Narcoticks* are the chiefeſt parts of it, the vital ſpirits being now ingaged at the deepeſt, and ſomewhat giving way, are not to be quite caſt down and overthrown by ſuch

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Narcoticks, or their ſtrength to be fettered by them. Wherefore thoſe things are to be given with a great deal of caution and ſcruple, eſpecially to ſuch, as lye languiſhing, to avoid the throwing them into a ſleeping bottomleſs pit, as moſt may remember, hath happened to many. Others endeavour to relieve caſt down Nature with pretious fragments, *Bezoar ſtone*, *Pearl*, *Coral*, and ſhelly medicines, as if they would redeem her for a certain price, from a deplorable ſtate; but to no purpoſe, for theſe premiſed ſtones, ſince they do chiefly conſiſt of a ponderous earth, though pure and tranſparent, being taken inwardly, through their weight ſink to the bottom of the ſtomach, which for that reaſon they do extreamly burden, and oppreſs, and occaſion obſtructions round about. Under what notion they refreſh the heart, and vital ſpirits, and oppugn the malignity, hath not been my luck hitherto to diſcover; it's true, through their ſplendor and rayes they recreate the optick, and likewiſe ſympathetically the other animal ſpirits; but do not in the leaſt ſtrengthen, but by diſperſing the ſight rather weaken them. When they are reduced into powder, they contain nothing that is volatil, nor

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any fixt salt that may be advantageous for the liquor that floats in the stomach to extract, unless they are calcined before. If you instance that the acid liquor of the stomach, which goeth by the name of a *Ferment*, doth extract the tincture out of them, that contains all their energy, and entire faculties, take for answer, that, 1. At the time of a Fevor, the stomach is quite deprived of that acid humour. 2. The tincture of almost all stones are not real tinctures, but alterations and concoctions of the *Menstruum*, proceeding from the matter, that is to be extracted, which notwithstanding doth not communicate the least thing to it, since after the extraction is made, if it be weighed in a scale there is not a grain of its weight lessened. Moreover, what concerns the *Bezoar* stone, I have known seventeen grains of it given to a Vintners child, that was scarce two years old, without the least operation or alteration following upon it. Some that were grown up, who had taken half a dram of it, found no kind of alteration, but an oppression and weight at their stomach; besides I pass by, that the greater part of those stones is fictitious, and counterfeit.

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At the concluſion of this chapter, there remains ſomething to be ſaid, concerning the uſe of *Epiſpaſticks*. According as they are uſually applyed by Phyſitians now a days, their greateſt benefit is, that a few (namely ſuch as lay ill of Fevors) having undergone the puniſhment of *Veſicatories*, had recovered their former health, and many that had received the ſame kind of puniſhment, were dead. At preſent ought to be inquired into the matter of fact, whether thoſe few ought rather to bleſs *Veſicatories* for their recovery, than many others to curſe them for being the occaſion of their death. The caſe is to be decided by the conſequence; a few that have uſed *Veſicatories*, have eſcaped, many that have uſed *Veſicatories*, have periſht: it may then probably be concluded, that the uſe of *Veſicatories* is pernicious and mortal. But let us take the reaſon of the thing into conſideration; for the moſt part, that ſmall number, that have eſcaped from a continual Fevor, (after the concoction was paſt, which through occaſion of their lowneſs of ſtrength was not diſcovered) have had *Veſicatories* applied, which by reaſon of the concoction and ſeparation have drawn forth a great puddle of ſalt and ſharp water into

to great bubbles; but thoſe, on whom the precited *Veſicatories* have been affixt, where there hath been no concoction or ſeparation before, have had a ſmall quantity of moiſture extracted into low blains, which for the moſt part is a mortal ſign; ſo that it doth appear thence, that the cauſe of their cure and recovery is not to be aſcribed to the *Veſicatories*, but to the ſubduction and concoction of the malignant water and heterogeneous humours.

Secondly, in *Epiſpaſtick* medicaments the *Cantharides* perform the chief work, the relation of whoſe properties I judge may be advantageous. They are of a moſt hot and burning nature, they oft occaſion Fevors, great tortures and pains, a diſturbance of the humours in the veſſels, and a very ſharp irritation, which a *dyſury* and bloody making of water do oft follow, they are extreamly hurtful to the brain and ſinews, and ſuddenly deſtroy ones ſtrength, ſo that they are markt with a ſignature of the moſt malignant venom, though only applied externally.

Wherefore if *Epiſpaſtick* plaſters, being thick ſpread with *Cantharides*, are applied to a Patient, that is ill of a malignant Fevor, at the time of the vigour, when his ſtrength

ſtrength is decayed, do they not increaſe the Fevor, put the malignant humours into a rage, heap up one malignity on another, quite oppreſs the principal faculties, deſtroy the forces, and certainly deprive the Patient of his life? Poſſibly here may be objected, that though *Veſicatories* do occaſion a great deal of hurt *per ſe* to a fevoriſh body, yet *per accidens* they do abundance of good by exhauſting the malignant *ſerum*, and putting the external parts to pain, whereby there is a revulſion made of hurtful humours and ſteems from the brain. Hereunto is to be replied, that in this caſe, the blood is moſt frequently wanting of moiſture (whence the febril fire burneth the more violent) ſo that it's poſſible only to attract a very few drops, whereby a heap of very great evils is brought upon the Patient. Secondly, ſince malign corpuſcles are chiefly ſeated in fuliginous ſalts, you cannot poſſibly by any device extract them; for at the time of the ſtate, they are ſo very cloſely and intirely ſoldred to the humours, that to draw them aſunder, is by no means feaſible. That theſe things are ſo, is proved by this argument; The Ichor or bloody moiſture, that by an Epiſpaſtick is attracted outward at the

the time of declination, or concoction and ſeparation, doth ſwell out in a great quantity under the blains, which when cut doth leap out, being of a ſharp taſt, fiery and ſalt, becauſe it's laden with thoſe foreſaid fuliginous and malignant ſalts; but being expelled at an unſeaſonable time, appears limpid, inſipid and freſh. Moreover I will now tell you, what the vulgar will ſcarce give credit to; namely, that Veſicatories being applied at the declination to parts, that are not ſo convenient, have very ſuddenly ſnatcht ſick Patiens away out of this ſublunary orb. A certain perſon, that was ill of a burning and malignant Fevor, aged thirty two, after he had lain ſick fourteen days, not without ſome ſigns of perfect concoction and ſeparation, in manner that on the fifteenth he walkt ſeveral times up and down his room, being attended with all characters of health, to expel the latent malignity outwards, had by the advice of two fermenting Phyſitians, at the hour of Reſt, large Veſicatory Plaiſters applied to the nape of the neck, and the wriſts. The following morning the Fevor was burſted out again burning enough, his ſpeech was taken away, and was grown light headed; but that they might make an end of their

task, on the ſixteenth they took the man out of the world. Doubtleſs the malignant ſalts being attracted out of the whole body to the brain, and nervous parts, did very ſuddenly extinguiſh his forces and ſpirits.

Many other tragical caſes I could produce for teſtimonials, did not the purpoſe of a compendious tract diſſwade me, wherefore take the precited in lieu of all. It may be ſtated for a certain, that at the beginning of a malignant Fevor, eſpecially when it hath attracted the ſeminary of malignity out of the air, (which ſeldom happens) *Epiſpaſticks* being applied to the remote parts, the ſymptoms have been ſubdued immediately, and the Fevor extinguiſht; but then they were applied within the third or fourth day. Likewiſe, being affixt to one that is taken with a peſtilential infection, they have been very advantageous. In ſome caſes they may alſo be applyed to convenient parts at the declination.

My buſineſs doth only permit me to premiſe theſe particulars in this *firſt Section*; In the ſecond ſection which will e're long follow, I ſhall apply my ſelf to give you a deſcription of putrid continual and malignant Fevors, likewiſe of the Small Pox, and Meazels, by their foundation, ſubject

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and ſymptoms, and likewiſe ſhall ſubjoin practical obſervations, and the true method of cure and remedies. In the third ſection ſhall diſcourſe of the diviſion of Fevors, and in particular of intermittent Fevors.

Upon ſo important an affair as the Practical part of Malignant Fevors, I ought not to make ſo ſudden a receſs, as to leave thoſe ſalutiferous maxims, premiſed in this Tract, only aſtipulated with reaſon, but to recommend them to you confirmed by experience, abſtracted from thoſe cures, which for ſucceſs and happy event are not to be conferred with the vu gar methods. Among the number of them I could here produce, ſhall only inſert ſome few of the laſt years date, whence a proof ſufficiently evident may eaſily be reduced.

The laſt preceding autumn I was called to one Mr. *Van Mildert*, a *Dutch* Merchant of conſiderable note, aged about twenty nine, of temperament Pituitous and Melancholick, not robuſt of conſtitution, but of a rare texture of body. On the Sunday he was ſurpiſed with drowſineſs and heavineſs of his head, a Catarrhe in his throat, an ulcerous laſſitude, a *rigor* or ſhivering and ſhaking, a nauſeouſneſs or in-

clination to vomit, and some other symptoms dependant on the former: during the first four days he used the prescriptions of one of the elder City Physitians, the chief whereof, to the best of my memory, directed some vulnerary vegetables for a decoction; another was a decoction of *Carduus B.* in posset ale, intended to move a gentle vomit, and after that, advised bleeding. The fifth day I made my first visit, and found the Patients sense of sight and hearing much diminisht, his pulse extreamly languid, inequal in motion and debility, a little more frequent than in the state of health, the urine thick, turbid, and a little high coloured; the tongue scabrous, red, dry and fissured; his thirst was so extream, that no quantity of any former drink could in the least abate it. By intervals his rational faculty was perverted with a *Delirium* that would continue several hours. Touching his sleep, some dayes and nights he was wholly restless, other dayes soporous and comatick, a case of greater difficulty I have not met with, neither have I observed any to escape such symptoms, being universally declared mortal, *viz.* the pulse at the beginning extreamly languid, the tendons of the wrist convell'd and vibrating, the animal faculty

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ſuppreſt and broken, the urine very crude and indigeſted, &c. This being a malignant Fevor and contagious, (for the Patient had lately conceived the ſeminary of his diſtemper at *Amſterdam*, where it was then Epidemick,) certainly is a caſe that may give evident teſtimony of the effect of the method premiſed, and aſſerts the rationality of the practice thereof. For only at the beginning I ordered a Laxative Glyſter, and not after; preſcribed an Alexipharmacal Apozem with particular ingredients to allay the fury of thoſe lixivious and abſorbing ſalts, that continually ſublimed to the upper part of the ſtomach, and occaſioned his exceſſive drought, which proved ſo ſucceſsful, that in twenty four hours after, no more complaint was made of it, during the whole courſe of ſickneſs. The ſixth, ſeventh, and eighth day were exhibited greater doſes of Alexiterial powders, and decoctions, than afterwards; ſoon upon this the vital faculty began to revive, and pulſate ſo, that it might ſenſibly be perceived by the touch, his urin began to be digeſted, and was voided in greater quantities. On the eleventh day the urine was perfectly concocted, and the pulſation of the arteries was vigorous; all his ſym-

ptoms did much abate in their violence, except the deprava ion of his rational faculty, which perſiſted by reaſon of ſome febril ſteems, and calcined ſalts, that aſcended to the brain. It was here, if at any time, that Epiſpaſticks might be of ſome uſe in revelling thoſe ac imonious ſteems, and exhauſting part of the ſalin *ſerum*, that abounded and was ſeparated from the blood, likewi.e there being preſent all the good ſigns of concoction, ſeldom doth any ill iſſue from them. The thirteenth day they were applied to the legs, and arms, according to expectation they attracted a vaſt quantity of *ſerum*, which continued to flow copiouſly for ſome days after. The Patient was perfectly reſtored.

The firſt Aphoriſm of *Hippocrates*, i e. *Occaſion and opportunity is of great moment*, is in no caſe ſo important as in Fevors, eſpecially if malignant; for every day and hour you have an opportunity of applying remedies, that for the moſt part do cure the diſtemper; but if you ſlip this opportunity, and thoſe remedies are adviſed late, that ought to be applied ſoon, and thoſe ſoon, that ſhould be adminiſtred late, you muſt certainly deſtroy and kill the Patient.

Patient. As for inſtance, in the caſe here recited, if Epiſpaſticks had been applied on the tenth or eleventh, before a digeſtion, or if he had been blooded after the ſixth, or if a Purgative Glyſter had been made uſe of near the ſtate of the diſeaſe, or if Antifebrils and Alexipharmacals had not been given in the beginning in large quantities, whilſt there was ſtrength and ſpirits to ſubdue the *materia febrilis*, in all probability this perſon muſt have ſtoopt to the diſtemper.

The Malignant Fevor, by which Mr. *Drakes* ſon in *Hind Court* in *Fleetſtreet* was attackt in *Auguſt* laſt, in point of eminent danger and difficulty, doth almoſt parallel the preceding. He was aged twenty four, and of a ſanguine temperament. It was from a pernicious air on board of a ſhip of war, and the uſe of hot liquors (which for the avoiding inconveniencies, ariſing from the nauſeous ſalin vapours of the Sea, moſt do ſubmit themſelves unto) this diſtemper had taken its growth, and with a ſpeedy career was advanced to a great defect of vital ſpirits, the arteries ſcarce giving any teſtimony of their pulſation; likewiſe a black ſcabrous ſooty tongue, an inſatiable drouth, a moſt piquant burning heat, want

of ſleep, anguors, continual jactitations, dejection of appetite, nauſeouſneſs of ſtomach, frequent and oppreſt reſpiration, and an intermittent *delirium* were ſymptoms that were very urgent. The ſeventh day gave an indubious remark of the malignity, the Patients skin being univerſally pencill'd with red ſpots, *Petechiæ rubræ*. The courſe of remedies was thus managed. The ſecond day he was blooded out of the right arm, to nine ounces; the third day received a laxative glyſter in the morning; at four in the afternoon, an Alexiterial Apozem of *Rad. Scorzon. Biſtort. acetoſ. fol. ulmar. pimpinel. galeg. dictamn. cret. dracunt. ſem. Hormin. citr.* there was alſo added a ſmall proportion of *ſcordium* and *Abſynth. Rom.* which latter ſeems to be the ſole ſpecifick againſt naſeouſneſs and vomiting in Fevors. To theſe forementioned were added ſome ſalts and ſpirits to contemperate their heat and refine their *ſulphurs*. The firſt, ſecond, and third doſes of this Apozem were very liberal. A day or two after was preſcribed an antilipyrious powder of *Bezoard. mineral. Coral. Terra Sigil. Sal. Prunel.* &c. By which means the body was gradually promoted to a *Diaphoreſis*, and *Diureſis*, and laſtly there appeared

appeared a large *Parotis* or inflammation under his ear, a ſymptom Pathognomonick to peſtilency and malignity, which being ſuppurated, deterged, and conſolidated, the Patient arrived to a perfect ſtate of health. Moreover both in this and the former caſe, was preſcribed a cordial julep, to take by intervals, for the preſent ſupport of the vital and animal ſpirits. Likewiſe twice there was made uſe of an Opiat. A *Diarrhœa*, or looſeneſs ſurvening, or concomitant to a malign Fevor, is judged a ſymptom as urgent, as any other whatſoever, and doth not only require particular remedies, but oft ſuch, as the malign Fevor doth counterindicate, and conſequently muſt ſhew a very ill aſpect to the life and recovery of the Patient. Such was the caſe of Mrs. *Read* on *Lambeth* Hill, aged thirty, and of temperament phlegmatick and melancholick, her Fevor was uſhered in with a looſeneſs ſo very importune, that on the ninth day, her Viſitors and Neighbours expected her departure: on the ſame day it was I made my firſt viſit, and having examined, what was preſcribed by her former Phyſitian, (who likewiſe had a very ill opinion of this diſtemper) and detecting ſome great errors in this courſe, was in hope that

that by their rectification, and the preſcription of means more rational, I ſhould reſtore her to former health. I preſcribed a Reſtringent Cordial, Anodyne Glyſters, Antiſebril Adſtringent Powders, and an Alexipharmacal Apozem. Thrice alſo there was an *Hypnotick* given. But the chief means was the method, (which I need not here repeat) that proved ſo ſucceſsful, in conquering this dangerous diſtemper.

I ſhall forbear inſerting the recital of many other cures of this nature, ſince theſe are ſufficient to convince you of the truth and excellency of this method; and paſs over to an obſervation I have univerſally remarked; that all or moſt malignant Fevors, though dextrouſly cured, leave ſuch an impreſſion on the bowels, that thereby within a month, two or three, another diſtemper is ingendred, that for the moſt part proves obſtinate to cure, and in this particular they imitate the manner of operation of venoms or poyſons, which being accidentally taken inward (and though afterward well cured) yet occaſion ſuch an impreſſion on the bowels and blood, that in a fortnight or month, or ſometime longer, either the Patient loſeth his nails, the hair of his head, and the cuticula, or upper

per skin of his body; or falls into a Jaundice, Conſumption, Dyſentery, or ſome other diſtemper.

The diſtempers that are poſthumous to malignant Fevors, are chiefly a tertian Ague, a Pulmonick Con umption, a Hectick Fevor, Rhumatiſms, Scurvey, Dyſentery, Yellow jaundice, Cachexia, and a Cephalæa.

Among theſe the Pulmonick Conſumption ſeems to tranſcend the others, in reſpect of danger and ſtubbornneſs of cure, and doth very frequently grow out of the cinders of a malign Fevor.

One Mr. *Martin* a *French* Merchant, his age not exceeding thirty, and lodging in *Fanchurch ſtreet*, partly through a hot temperament of his bowels, that was natural, partly through the *fatigue* of his journey from *Plimouth* hither, and intemperance of diet, fell into the burning flames of a malignant Fevor, which his purpre ſpots breaking forth on the ſeventh day throughout the whole field of his skin, did amply detect, whereunto adjoyning his preceding vomiting, and moſt importune hiccough, his impatient thirſt, dry red fiſſured tongue, deplorable head-ach, flammy urine, and low frequent inequal pulſe,

ſpake

ſpake the diſtemper to threaten an ill event. Having ordained his diet to be very thin, and preſcribed a laxative Glyſter in the morning, being the ſecond day of his Fevor; adviſed eight ounces to be extracted by phlebotomy out of the right arm, at four in the afternoon. The blood appeared very thin, and in point of colour tending towards a blew, whereinto I inſtilled a few drops of ſpirits of Nitre, to diſcover the conſtitution of it. Upon the commixture, the colour turned to a vitellin citrin; an indication the blood was very ſulphurous and hot, and not eaſily to be reduced to a *Craſis*. Six hours after bleeding, he was to take a doſe of this following mixture.

R. *Rad. Scorzoner. rec.* ℥ij.
fol. ulmar.
lujul.
Rut. Caprar. ana mij.
Sem. Citr. ℥ſs.
Contundantur optimè in mortar. marmor. piſtil. lign. ſenſim affundendo
Aq. *Card. Ben.*
ſcabioſ.
Ceraſ. nigr. ana ℥iiij.

Li-

Liquor valide expreſs. digerendo calore leni Balnei depuretur, in quo diſſolv.

Syr. Borrag.
Meliſ.
ſacchar. perl. ana ℥j.
m. f. Julap.
Capiat ℥v. *bis per diem mane & ſero.*

To every doſe of this mixture was added half an ounce of my *Aqua Alexiteria*, which wrought ſo great effects as in few days to extinguiſh this violent heat, and expel the malignity. His ordinary drink was the decoction of *Hartſhorn*, and *Scorzonera* root, ſweetned with *ſyrup* of *Succory* and *Borrage*.

His tongue growing very ſcabrous and foul, he made uſe of this following collution with great ſucceſs.

R. *Mucilag. ſem. cydonior.* ℥iij.
Suc. plantag. ℥j.
Mell. roſar. ℥vj.
Sal. prunel. ℈ij.
m. f. Collut.
quo ſæpe colluat os.

July was ſcarce begun, before this Patient had quitted his ſick bed, and was congratulated by all his acquaintance for the unexpected reſtitution of his health; But what was uſually ſubſequent to a malignant Fevor, happened here alſo; ſome three months after, another diſtemper attempted his lungs, in ſo violent a manner of coughing, that in a ſhort time the whole body was emaciated, and depredated by a Hectick Fevor, againſt which theſe remedies were preſcribed.

R. *Rad. buglos.* ℥ß.
Jujub. ſebeſt. ana *Par.* ij.
Flor. borrag. violar. P j.
Glycyr. raſ. ʒj.
Tamarind. ʒiij.
Sem. fœnic. d. ℈ij.
Coq. in Aq. Font. q. s.
In Colat. ℥iiij.
Diſſolve man. Calabr. ℥j.
Syr. roſ. ſol. ʒß.
m. f. Pot.

This operated four times.

The next day I ordered a fontinel to be cut in the left leg above the knee. The third

third day he began with this decoction.

R. *Rad. Sarſaparil.* ℥v.
Lign. ſantal. citr.
Raſur. Corn. cerv. ana ℥j.
Coq. in. Aq. font. lb. viij. *ad conſumpt.*
medietat. ſub fin. addendo
Rad. *Perſonat. maj.* ℥ij.
Lapat. Acut. ℥j.
Fol. Heder. ter.
farfar. ana m. iij.
Jujub. ſebeſt. ana Par. xv.
Dactyl. enuc. Par. xij.
Paſſul. mund. ℥iiij.
Glycyr. raſ. ℥jſs.
Sem. Aniſ. ℥x.
In Colat. diſſolv.
mel. coct. ℥vj.
Sacchar. cand. ℥iij.
m. f. Apoz.
Capiat ℥iiij. *ter per diem horis*
medicis.

Beſides, an hour before he took the drink in the morning, and an hour after at night, I gave him twenty grains of my
Specific. antihectic. mixt with
a dram of ſugar of Roſes.

To

To these means we sensibly observed the disease give way daily, by the digestion of the acrimonious matter, and the facil expectoration of it, and at the termination of three weeks his cough was quite ceased, his appetite returned, and began to increase in flesh, and so to enjoy his health, wherein he hath been happy ever since without the least relapse.

Another president of the subsequence of a Dysentery upon a malign Fevor, I shall instance in the distempers of Mr. *Cocu*, an Elder of the *French* Church in *London*, whose age was little short of threescore, his temperament bilious and melancholy, and of habit of body very thin and maigre. There was scarce ten weeks interval between a torrid Fevor he had sustained, and a violent bilious diarrhæa, that in the space of two or three days changed into a dysentery, whose fury was discernable in insupportable gripes, and vast discharges of blood by stool: the weak pulsation of his arteries, signified a great impair of the vital faculty. A crazy constitution, a declining age, and a torminous Hæmorrhagious dysentery imposed an obligation on me of proceeding cautiously and gently against the distemper, but withall considering the quick

mo-

motion it uſeth in its tendence to a fatal determination, required medicines, that ſhould avert it, by ſpeedily ſtopping its career; to the accompliſhing of which was preſcribed firſt this following bole.

R. *Rhab. el. pulv.* ʒß.
Bezoard. min.
Ter. ſigil. ana gr. xij.
Sal. Abſynth. gr. viij.
Laudan opiat. gr. j.
Conſerv. roſ. vet. q. ſ.
m. f. Boli duo deaurandi
quorum capiat unum veſper. ſub ingr. in lect. & alterum ſequenti aurora.

Theſe Boles gave two or three dejections more, than he uſed to have ordinarily, but without occaſioning any gripes, and moving at ſuch great intervals between each ſtool, did not at all diminiſh his ſtrength. Likewiſe ſleeping moderately in thoſe intervals rendred thoſe turbulent humours very pacifick, neither did he eject any blood all that day; the following night ſlept very quietly. The next day the number of his motions was much leſſened, but ſome tincture of Blood was ſtill obſervable in the ordure. The diſtemper continued

at this degree ſome two or three days, and then I gave order the forementioned Boles ſhould be repeated, which put an end to this great malady; for the next day had not above two or three motions. For his ordinary drink was adviſed this Emulſion.

R. *Amygdal. d. excort.* ℥j.
Sem. cucurb. ℥ij.
Sem. cydon. ℥ſſ.
Sem. papav. alb. ʒjſſ.
contund. in mortar. marm. piſtil. lign. ſenſim affund. ndo Decoct. raſ. corn. cerv. lb. ij.
in expreſſ. diſſolv. ſacchar. albi ℥iij.
Aq. cinam. ʒiij.
m. f. Emulſ.
capiat ad libit.

This cordial did him great ſervice in ſupporting his vital faculty.

R. *Aq. roſar.* ℥iiij.
Aq. menth.
Ceraſ nigr. ana ℥jſſ.
Aq. Cinam. ℥ſſ.
Spir. menth. ℥j.
Confect. Alkerm. ʒj.
Syr. cydon. ℥j.
cort. citr. ℥ſſ.

m. f.

m. f. Julep.
Capiat cochl. ij. *altern. hor.*

Thoſe days excepted, on which he took his cathartick bole, he made uſe of this cordial and adſtringent Electuary.

R. *Corn. cerv. uſt.* ℈j.
cui inſtill. ſpir. corn.
Cerv. rectif. gut. x.
& conter. in mortar.
Vitr. huic adde
Coral. rub. opt. lævig.
Ter. ſigil.
Bezoard. min. ana ℈ß.
Croc. angl. gr. ij.
Diacydon. s. q. s.
m. f. Electuar. pro
duabus. doſib. matut. & veſpert.

Since no practice or method of curing a diſtemper ought to be received, unleſs it can be juſtified by the application to ſeveral ages and both ſexes; I am induced to give you the narrative of a malignant Fevor, Captain *Mannings* daughter in *Bell-yard Kingſtreet* was afflicted with: her age was between nine and ten years; her temperament ſanguine and bilious, habit

of body thin and lean, and in reſpect of the whole compoſure weakly. The ſecond day the malignity appeared in a *delirium*, and oppreſſion of the vital faculty; her heat was very great, and drought very urgent. The ſame day about four in the afternoon I adviſed, ſhe ſhould bleed about five ounces out of the right arm; the next morning a glyſter was given. Her ordinary drink was this following decoction.

R. *Raſur. Corn. cer.* ℥j.
Rad. ſcorzoner. ℥jſſ.
Tamarind. ℥ſſ.
Coq. in Aq. font. q. ſ.
in Colat. lb. ij. *diſſolv.*
Syr. acetoſ.
borrag. ana ℥jſſ.
m. f. Apoz.
Capiat ad libit.

Some four hours after bleeding I preſcribed an ample doſe of an Alexiterial Julep, with twelve drops of *Eſſentified ſpirit* of *Hartſhorn* dropt into it, the ſame was to be repeated for two mornings and nights following; the operation of theſe medicines was ſignal in a gentle ſweat and breathing, which on the ſeventh day extinguiſht the Fe-

Fevor and malignity. Though this course proved so successful, as to restore her to a perfect health; I am apt to suspect that about the next Autumn she will be troubled with an intermittent Tertian, because malignant Fevors, as I observed before, generally leave an impression on the bowels, through which in a short time another distemper is ingendred. This observation not long since was verified in the tertian ague, one Mr. *Powel* a Taylor in *King-street Covent Garden* was surprised with, three months after I had cured him of a very malignant and dangerous Fevor. The principal medicine, to which I attributed the cure of this Fevor, was spirit of Hartshorn, depurated of its poysonous *Sulphur* and salt, by a late invented process. That the sulphur and salt I do defecate by the forementioned process, from spirits of Hartshorn, is venomous, appears by these circumstances. 1. The quantity of two scruples is a proportion sufficient to kill a dog. 2. The scent of it doth commonly occasion vomiting, and a raging headach. 3. The spirit of Hartshorn that is thus freed and depurated from this noxious *sulphur* and salt is far more powerful in provoking sweat and urine in the same quantity and dose,

than the common ſpirit. Neither doth the ſaid ſpirit cau e that burning heat, anguor, and ſuffocation, which the common uſually doth.

His Tertian Ague, though the paroxyſms were durable to ten or twelve hours, and the other ſymptoms very fierce, yet was eaſily conquered by taking three doſes of my *Pil. Polychreſtæ.*

Since a greater number of particulars than two or three is required to render an obſervation univerſal, I ſhall inſert one or two more. I have a page or two before given you the journal of the malignant Fevor of Mr. *Van Mildert*; it was in him alſo the preceding obſervation was confirmed: for about two or three months after his recovery from the ſaid Fevor, he was taken with a violent *Rigor*, *i. e.* ſhivering and ſhaking, a raging headach, vomiting, a great drought, a bitter taſt in his mouth, and after the *Rigor* a very ſmart heat, and towards the latter part of his paroxyſm did ſuffer a moſt immoderate ſweat, a ſign this ſingle tertian Ague would prove very obſtinate. After a Laxative Glyſter, there was eight ounces of blood drawn out of the right median on the intermittent day. Eve-

ry

ry other day he took a dose of a *Vinum Medicatum* compos'd out of Hepaticks and purgatives done up in a bag, and infus'd in an anatick measure of Rhenish Wine and Succory water. Having us'd this thrice he intermitted eight or ten days, and then took two doses of Antisebril Pills, which perfectly cured him of this stubborn Tertian.

Mrs. *Wilkins* a Tradesmans Wife in *Drury Lane*, three or four days after delivery of a child, was on a sudden taken with a shaking, after that with a very scorching heat, and a oppress frequent respiration; the second night raved, and was very turbulent. This Fevor, which from those symptoms might justly be termed malignant, took its rise from her wine Cawdels, and supping of hot Spirits, which the good women had given her, to support her strength, whereunto her eating meat, as Pigeons, and other heavy food, did much contribute, in the causing an ebullition of the blood, and suppressing her *Lochia*. I advised her to have the Saphæna opened, for derivation and revulsion, and caused *Suppedanea* to be applied compos'd of Pickle-herrings, Soap and Salt of Tartar: Prescribed Whey made by instilling some few drops of spirit of Salt into Milk, hereof a half pint to be taken

warm three times a day with xxv drops of eſſentified ſpirits of Harts-horn; the ſucceſs of theſe remedies appeared in the quick return of her *purgamenta*, and occaſioning a moderate *Diaphoreſis*, which ſoon put a termination to the Fevor. She enjoyed her health near ten weeks, about which time ſhe fell into a melancholy, and a great palpitation of the heart, not without frights and fears. This continued eight days, when the Moon being at full, ſhe grew maniack or Bethlem mad. I ordered ſhe ſhould be kept in a dark room, and be blooded nine ounces out of the right arm, two days after gave her a doſe of *Hartmans Antimonial, Cathartick Pills*, which operated very well. Upon three days intermiſſion repeated the ſame Pills. Next morning ſhe took this following Electuary,

R. *Vitriol. Lunæ fix.*
Bezoard. Lunar.
Sulphur. Antimon. ana ℈ij.
ſal. ſuccin. ʒſ.
Conſerv. Borrag. ℥j.
m. f. Elect.
Doſ. ʒj. *mane & ſero*
ſuperbibendo ſeri lactis
borraginati ℥vj.

For

For her ordinary drink one ounce of *Tinctura Antimaniaca* was added to ſix gallons of ſmall ale. Her hair was ſhaved off, and every morning fomented with the decoction of *Marſh Mallows*, *Violet Leaves*, *Pellitory*, *St. Johns and Chamomil flowers*, whereunto was affuſed ſome *ſpirit of Amber*. There was alſo an iſſue made above the left knee; the uſe hereof in eight and twenty days did reſtore her to her former ſenſes, and perfectly freed her from that diſtraction, ſo that ſhe hath never been troubled with it ſince. The malignant Fevor I formerly cured Mrs. *Lamot* of (whoſe Huſband is a Merchant in *Thames* ſtreet, near Fiſhmongers Hall,) and ſome weeks after a violent Rhumatiſm following, which was removed by two bleedings and a doſe or two of *Hydrotick Pills*, is a farther confirmation to me of the preceding obſervation, which to illuſtrate by a greater number of inſtances I judge is needleſs; and therefore ſhall proceed to recommend to you a remark of uſe ſo important, that it may gain the Phyſitian repute and ſave the lives of many Patients. The obſervation is ſuch that it gives me occaſion to admire ſo many preceding ages have ſo groſly erred in their practice, and doth likewiſe detect the cauſe why

why malignant, and indeed moſt Synochical Fevors prove ſo oft mortal.

It is an univerſal theorem, that in theſe Northern Climates Fevors are terminated not critically, but ſlowly and gradually, by ſweat and urine, (*per Diaphoreſin & Diureſin*) Through the former, *viz.* ſweat, the ſalin volatil, and fuliginous matter is expelled; through the latter, namely urine, the fixt ſalin and lixiviated matter is excern'd. To accompliſh this uſually (as I ſaid before) are preſcribed Diaphoreticks, as *Aqua Epidemica*, *Theriacalis*, *Scordii Compoſita*, &c. of one, or more of theſe, the meaſure of an ounce or two is mixed with the ſame proportion of Alexiterial ſimple waters, and hereof two or three ſpoonfuls is to be given, every ſecond, third, or fourth hour, according to the *Capricio* of the Phyſitian, undoubtedly the effect doth not anſwer his expectation, and no ſweat appears; upon this it may be double the quantity is to be uſed, and yet not a drop of ſweat is forced out; then apologizes your Doctor for himſelf, and tells you, if the Patient could but be brought to ſweat, he would ſoon mend, and further prognoſticates, if he doth not fall into a a ſweat by to morrow, or it may be next day,

day, he is a dead man, and ſo *Buenas Noches*. Now I will render it as evident to you, as the light of the Sun, that Mr. Doctor is the cauſe of this mans death, that is to be underſtood, κατὰ πολύ. There being nothing more familiar among the fermentators, than to explain their notions by theorems taken from the Brewhouſe, and Kitchin, I ſhall make uſe of arguments deſumed from the ſame Categories. There is poſſibly a piece of meat to be prepared for to be eaten, which to maturate or take away the crudity of it, to mollifie or render it tender, to diſſolve and to purge it from its filth and impurity, is to be boiled; if you put to it ſalt, wine, or other ingredients, and there be not a ſufficient proportion of water, or that the water boileth away too much, eſpecially if the meat be left dry, it will not only harden, but be burned, ſmell of aduſtion or empyreum and ſoot, and be entirely corrupted and ſpoiled; whereas if it had been ſupplied with water, the meat would have been ſoftned, concocted, and depurated from its recrements and impurities, which it caſts forth into a ſcum. The caſe is not different in the blood, that boyelth up in the veins and arteries of fevoriſh Patients, which being full of ſalin, aduſt, and other

other heterogeneous particles, is by chullition to be depurated of the ſaid impurities; if then the blood wanteth water or *ſerum*, to diſſolve thoſe ſalin particles, it muſt neceſſarily grow dry, coagulate, and be burnt up; and conſequently death muſt be the unavoidable iſſue. Now obſerve, that a Patient, that hath been broyling under a continual Fevor for eight or ten days or longer, his entrails ſcorcht and parcht, his blood dried up, and affected with an empyreum, how impoſſible it is, he ſhould be put into a ſweat by hot cordials though diaphoretick, as *Aqua Epidemica*, *Theriacal. lap. Contrajerv.* to be given every third or fourth hour, by ſpoonfuls, or ſcruples. Theſe certainly muſt render the blood hotter and dryer, and totally abſorb the remaining moiſture. The infallible way to preſcribe a remedy to Patients of this nature, is, to obſerve that for to caſt one into a ſweat, you are to conſider the ſubject, the matter of ſweat, the efficient of ſweat, the ſeveral cauſes that hinder, *&c.* but chiefly the matter of ſweat and the efficient. The matter is the ſuperfluous ſeroſity of the blood. The efficient is the ſpirits, that expel the foreſaid ſeroſity to the circumference. Theſe two are neareſt cauſes, without both which

which at the ſame time no ſweat can be procured; for if we have only abundance of ſpirits, and no abounding moiſture, the ſpirits will be provoked into a greater rage and force, and conſequently if there be any moiſture remaining, they will abſorb that, and ſo quite exſiccate the body; this is that end, which the Fermentators and the Putrid Phyſitians attain by their *Cochleatim* cordials.

The indication drawn hence doth direct, that to procure ſweat (which as I ſaid before, is a common terminator of malign Fevours) is to moiſten the body well with appropriate Juleps or Apozems. Which done, give but two drams of any alexipharmacal water, or five or ſix drops of ſpirit of Hartſhorn rectified, and you ſhall certainly cauſe an abundant ſweat.

In the next place, conſider though there be moiſture ſufficient, to ſubminiſter matter for ſweat (as ſometimes there is in malign Fevors) there either may be a defect of ſpirits, or the ſpirits may be oppreſt by the malignity, and in a manner rendred languid, or drowned by moiſture too much abounding; then in this caſe Putrid Phyſitians do commit a killing error, in forcing the Patient to ſwallow down their acid Juleps and Apozems.

Apozems. The indication deſumed hence doth direct ſo ſubtil cordials, as through their penetrability may inſinuate into the moſt intime effuges of the body, and diſintangle the ſpirits from thoſe malign particles, that oppreſs them, which done, they will ſoon expel their malign enemies through the pores by ſweat. But ſince nothing can illuſtrate this point more than experience, I will give you a moſt convincing inſtance. I was not long ſince called out out of my bed to ſee the child of Mr. *Harvey* in *Fetter lane* end next *Holborn*, who I was told lay a dying. The child was two years and an half old or almoſt three. I found ſhe fetcht her breath with great difficulty, her Pulſe did beat convulſive, vibrating, and extreamly frequent, as in like caſes it uſually beateth, ſome two or three hours before death. She was delirious not knowing any, that were uſed to be about her, her eyes were very hollow, dim and very ſlow in motion, her face was pale and cadaverous. I examined how ſhe had been the day before, I was told, that ſhe had a high colour, had been very burning, and was very droughty, and drouſie. She had been ill ſome four or five days. After I had examined her mouth and belly, I

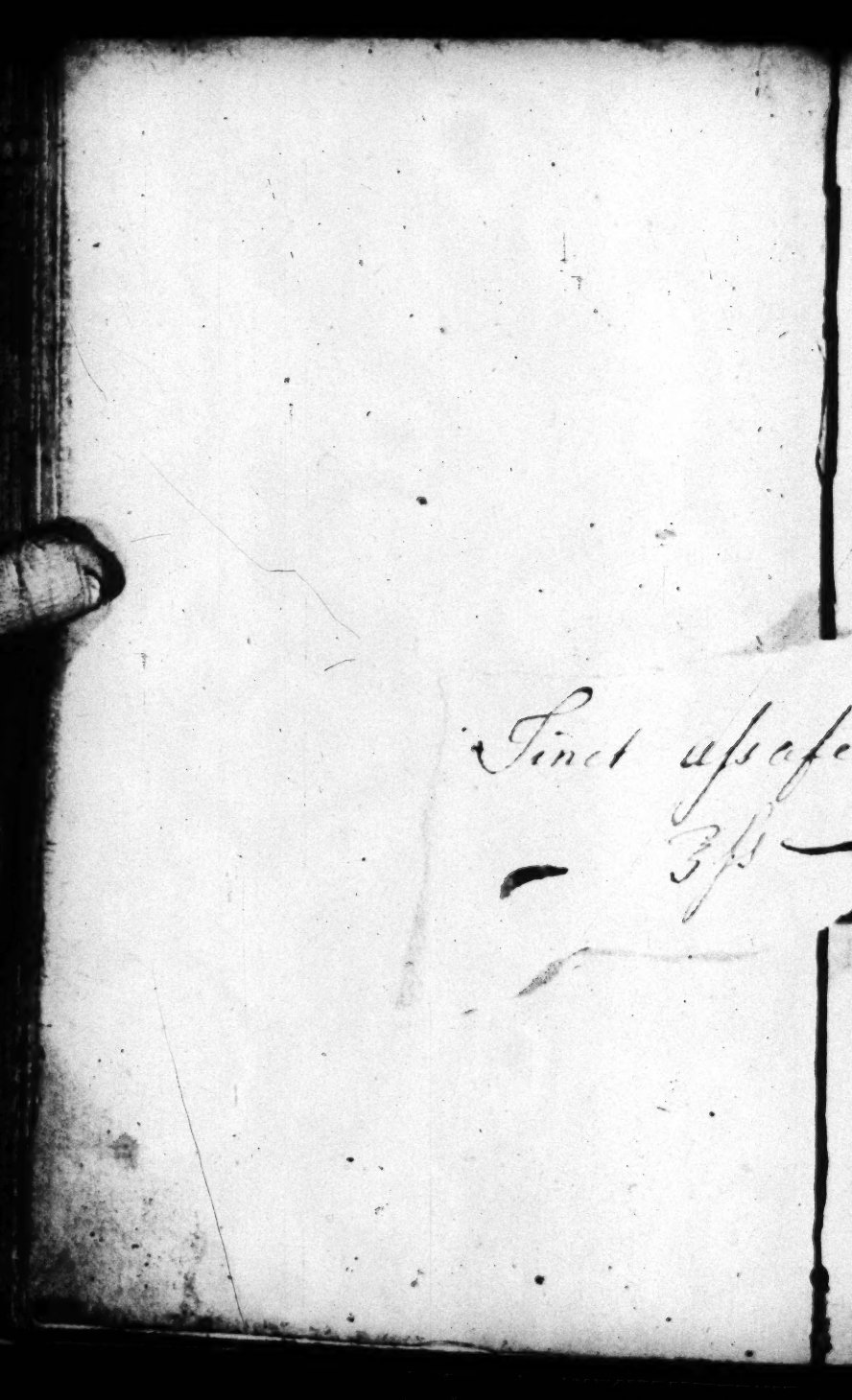
ſoon

ſoon underſtood what it was, *viz.* a malignant Fevor occaſioned by the Small Pox, which nature could not caſt forth for want of moiſture; for hot cordials ſhe had taken in abundance, almoſt every half hour, and would undoubtedly have been dead in three hours more had they gone on in that method. I preſcribed four or five drops of rectified ſpirits of Hartſhorn with a grain two or three of *Bezoard. mineral.* and a dram of *Aq. Scordii comp.* to be given in a large draught of pure poſſet drink; in leſs than two hours the Small Pox appeared, and ſhe was put into a tolerable ſweat, then cauſed two Epiſpaſticks to be applied to the Wriſts, which had ſingularly performed their operation. by extracting a great proportion of malignant ſeroſity. By next morning her ſenſes were returned, her aſpect appeared florid and vivid, her Fevor very much abated, and all her malignant ſymptoms vaniſht, inſomuch that within two or three days ſhe was perfectly recovered.

Some other obſervations I muſt refer to the next opportunity, in the mean time I wiſh Phyſitians would prefer experience before their opiniater notions.

FINIS.

Franz Joseph
Graf Lobkowitz



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